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## ORIGINAL ARTICLES.

### ENTEROTOMY AS COMPLICATING OVARIOTOMY.

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OF PITTSBURG, PA.

(Read before the American Medical Association, at Cleveland, June 5, 1883.)

In the autumn and winter of 1881, I spent a few months in the clinic of Prof. von Billroth, at Vienna. In October, of that year, I saw him open the abdomen for a supposed fibroid tumor of the uterus or ovary. The tumor proved to be a malignant tumor of the left ovary, and was adherent to the bladder and to a loop of small intestine. Prof. von Billroth removed the tumor, cut out the infected section of bladder-wall, and closed it with carbolized silk sutures. He then removed the infected section of small intestine and united the ends with carbolized silk sutures. This case recovered and was about the ward in the fourth week. Soon after my return from Europe, this spring, the following case occurred to me:

March 25, 1883.—Mrs. H., aged 50 years; youngest child aged 17 years. After this labor had pelvic peritonitis. Has since that date complained of some distress, by her attributed to "womb disease." States that for the last nine months her life has been a burden; asks that her abdomen be opened, and, if possible, that the difficulty be relieved. Says that treatment has never benefited her, that she lives on the simplest diet, that long ago she was compelled to cease the use of cooked meats owing to pain produced in the abdomen after eating them. She stated that evacuation of the bowels was always painful, and at times almost unbearable. Her husband stated that he had spent hours injecting her lower bowel with oil for her relief. On examination: the woman was badly nourished, pale, and feeble; her abdomen was flat, the wings of the ilia standing higher than its surface; resonance on percussion was everywhere present, excepting along a line an inch above and parallel with Poupart's ligament—here the dulness was only slight; deep pressure here gave decided pain; bimanual palpation per vaginam revealed the uterus in good position, free from soreness, of proper size, with the remains of an old laceration of the cervix on the left side; to the left of the uterus, above the vaginal roof and in front of the rectum could be felt a mass which seemed to be as large as a turkey-egg; it was movable in an upward direction, and I grasped it entirely with the fingers of the two hands; it was tender, and she complained of the pressure; bimanual palpation per rectum confirmed the statement already made, and the pain on pressure now made was earnestly complained of.

It was my conclusion that the body felt consisted

of the left ovary, and probably the fimbriated extremity of the Fallopian tube in a state of chronic inflammation, or more properly of hypertrophy, congestion, adhesion, and hyperæsthesia. There was no room for me to suggest laparotomy in the case. The woman gave me to distinctly understand that unless I would open her abdomen that my services were not to be employed. I assented to her request, and on March 28th with my two assistants, Drs. Rahausser and McDonald, and in the presence of Dr. Emmerling, also assisting, I opened her abdomen. I readily found the mass in the pelvis, it would not come up into the abdominal wound until detached with the finger from the sigmoid flexure of the colon. When brought well into view, it was found to consist—

1st, of the ovary not much enlarged.

2d, of the fimbriated extremity of the tube.

3d, of the broad ligament.

4th, of a loop of the small intestine, so fixed that it was curve-shaped in the mass, then passed along, firmly adherent to the broad ligament, up to the fundus of the uterus itself.

The entire mass was a conglomerate of ovary, tube, ligament, and gut.

The gut-wall was thick, and evidently a large mass of organized lymph had glued long ago all together.

My first impulse was to close her belly, but I remembered the patient's request as I lifted her feeble body on to the operating table. It was, "Now, Mr. Sutton, you take that out or let me die." With the finger I detached the gut from the mass and from the broad ligament nearly to the fundus of the uterus, and laid the gut on the surface of the belly at the margin of the wound, and turned around to wash my bloody hand and for a moment's reflection. When I turned again from the wash-basin, my second assistant was holding one end of the gut between his thumb and finger outside of the belly, the other end of the gut was in the cavity of the belly. It had broken off by its own weight, and the slightest traction to arrest its recession into the belly. I recovered the lost end, dissected it entirely free from the broad ligaments all the way up to the uterus, and securing each end with forceps, above the diseased tissue, I cut away all the diseased portion of the cut—about four inches. I now removed the ovary and adhering tissues, securing the base by ligature cut short. All diseased tissue being now removed, I united the ends of the gut with silk sutures and a curved needle, after the manner of Czerny, as taught me by Prof. von Billroth and his assistants, Mickulicz and Wölfler. Twenty or twenty-two sutures were put in. The belly was well cleaned out, and a long glass drainage-tube was placed in the wound, the lower end of it reaching the bottom of the pelvis.

The abdominal wound was closed, dressed, and the patient was put to bed. One hour was consumed in the operation. No spray was used. The silk (non-carbolized) was simply well scalded, as were also all the instruments. Before beginning the operation, the hands of all were well washed, and then re-washed in five per cent. carbolic-acid water. The drainage-tube remained forty-seven hours, and through it bloody serum was drawn in small quantities for thirty hours; clear serum then appeared, and the tube was removed seventeen hours later. No drug excepting opium was given. The highest temperature reached was  $101^{\circ}$  F. on the first night. It fell on the following day to  $99.5^{\circ}$ , and but once afterwards reached  $100^{\circ}$ —viz., on the twentieth day, when her ignorant husband gave her a dinner of veal. On the third day, she was passing gas per rectum. At the end of the fifth day, the pulse was 88, temperature  $99.4^{\circ}$  F.

On the 11th day, pulse 90, temperature  $98\frac{1}{2}^{\circ}$ ; the stitches were all removed on the previous day. No tenderness on gentle pressure existed over the abdomen, and the rectum was filling up with fecal matter.

On the 12th day, the rectum was emptied by an enema and the finger, and an hour or less later the lower end of the colon was also emptied with a little additional water. The bowels moved spontaneously on the 20th day. Up to that time enemata were resorted to frequently. Up to the 16th day the diet was soups and barley, and toast and water. Solid food, beginning with bread, was given; afterwards raw steak. On the 19th day, pulse was 72, temperature  $97\frac{3}{4}^{\circ}$  F.

On the 21st day she rose and got out of bed to the commode, and the bowels moved spontaneously.

On the 22d day, she was again out of bed for a movement of the bowels.

From the 22d day to the 25th day after the operation she received no medical care.

On the 25th day her family physician took charge of her, and at this writing 70 days have elapsed since the operation. She is going about, and taking solid food.

These cases prove the possibility of avoiding the making of artificial anus in wounds of the small intestine, and the resection of portions of the gut in some cases of hernia where the gut has become gangrenous.

Resections of portions of the intestine have frequently been made abroad, notably by Billroth, Czerny, and Von Wahl. The specimen is here for inspection, also a remnant of the silk used, and also the Koerberlé forceps used to secure the ends of the gut, as well as the curved needle with which the sutures were introduced. The specimen shows full four inches of the gut, and the left ovary but little enlarged. The gut was adherent to the ovary over nearly its entire circumference, and a well-marked stricture of the gut is seen. The wall of the gut is thick from inflammatory deposit, and has undergone at the point of stricture marked fatty degeneration.

The thickening of the muscular tunic beyond the adherent portion is also well marked, and this

thickening of the muscularis was a great aid in the introduction of the sutures.

# HAVE WE ANY THERAPEUTIC MEANS, AS PROVEN BY EXPERIMENT, WHICH DIRECTLY AFFECT THE LOCAL PROCESSES OF INFLAMMATION?

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(Read before the American Surgical Association, Cincinnati, May 31, 1883.)

BELIEVING that the true aim of a paper read before this Association should be merely the indication of the salient points of the subject, in order to elicit as full discussion as possible, I shall omit all such details as are non-essential. It will be impossible for me, in the time assigned, to answer the query forming the title of my paper except with regard to the early stages of inflammation. Owing to press of work, I have also been unable to pursue my investigations as far as I had wished, and should therefore prefer to entitle my paper "A preliminary note as to whether we possess any therapeutic means, as proven by experiment, which directly influence the local processes of inflammation." I trust that any apparent neglect to specifically mention the sources of my knowledge will be set down to the necessary brevity of this paper, and to the fact that all of you must be more or less familiar with the sources whence my facts are culled.

Careful study of the essential processes of various morbid conditions, has often led to the theoretical employment of therapeutic measures, which by their apparent practical use have confidently encouraged their future employment. Clinical proofs, however, always embody the inherent weaknesses of careless or prejudiced observation, with the varying unknown quantity of the effects of the *vis medicatrix naturæ*.

But if in addition we find by experiment that our *a priori* therapeutics when experimentally applied in the case of animals, actually produce the precise effects which we have pre-determined will probably prove efficacious, then we can hardly go astray in confidently applying similar treatment to the human subject. If now we find clinical discrepancies, it must be our aim to ascertain the exact limitation of the remedy for good or evil, and the precise indications for its employment, instead of thrusting it contemptuously aside, when we fail of the expected result, the failure being probably our faulty method of applying the treatment and not self-inherent. Upon the other hand we must always hold before our eyes the experimental mirror of what has been and can be effected, and not expect to do what we have demonstrated is an impossibility.

This paper is avowedly written in advocacy of bloodletting in general, but chiefly of the local abstraction of blood. This once much-vexed question seems again pressing for solution, as the pendulum of unreasoning prejudice and authority, having reached its furthest limit on the side of prescription, is now slowly swinging back to an opposite point, the stability of which must depend upon the possibility of satisfactorily answering the ques-



tion contained in my title. If the answer be favorable, the revival of bloodletting will be founded upon the only sure basis, viz., that of demonstrated scientific facts which will replace the purely theoretical dicta of authority, which, like the will-o'-the-wisp, led our forefathers into such an erratic use of the lancet that it wrought not only by its abuse its cure, but an almost total abolition of bloodletting, which I for one regret.

A rapid review of the minute processes of the earlier stages of inflammation, coupled with a consideration of some facts relating to the physiology of nutrition, will form a necessary preface to the body of my paper. I shall refer only to the early stages of inflammation, for, of course, no direct effect can be exerted upon the tissue changes of that process, when the inflamed part has returned to its foetal state—is merely embryonal tissue, only a step further from which is pus.

Examining with a low power, we find that the arteries are normally about one-sixth smaller than the veins, and that "in every artery a space can be distinguished within the outline of the vessel, which is entirely free from corpuscles." The arterial current is the more rapid, and it is appreciably accelerated at each beat of the heart. As to whether there is or is not a primary contraction of the arteries in the first stages of inflammation seems to depend so much upon the irritant used that I shall pass the question by as unimportant for our present purposes. The first change noted is an enlargement of the arteries, which become tortuous, the veins following suit; but there is "a time when, instead of the arteries being sensibly smaller" than the veins, "they far exceed them in diameter." Note this fact carefully. Contrary to expectation, at the outset the circulation is accelerated in the dilated vessels, but the rate soon becomes normal, and is succeeded by a slowing, then an oscillatory movement, a temporary stagnation; again a resumption of the flow, and finally permanent stasis, with crowding of the vessels—the veins especially—with cell-elements, so that the previous clear space existing along the walls of the arteries can no longer be detected.

The obstructions seem to consist solely of red cells, which are so closely packed as to render "their individual forms" . . . "scarcely distinguishable." Free diapedesis of the white-blood corpuscles now takes place, with exudation of liquor sanguinis, both processes having commenced when incipient stagnation set in. The experiments of Ryneck and H. Weber have demonstrated "that in an injured part, the walls of the capillaries become so altered that the liquor sanguinis, instead of transuding from the smaller arteries in quantities just sufficient to balance the absorption, leaks abundantly from the vessels, and that in many cases this is subsequently associated with squeezing out of the leucocytes, or even of the colored corpuscles." The consequence of this free exudation is that, owing to increased pabulum—liquor sanguinis—the cells of the inflamed area multiply until, in many instances, we have the tissue reverting to the foetal state, when it consists merely of embryonal

tissue—viz., a mass of indifferent cells held together by a small quantity of intercellular cement, which latter has only to liquefy, and *pus* at once results.

The remaining subsidiary phenomena of inflammation being non-essential, are purposely omitted.

To summarize the whole process in the words of Dr. Burdon-Sanderson, "the circulation is at first accelerated and increased, subsequently retarded and diminished," and "the latter condition is attended with exudation of liquor sanguinis, migration of leucocytes, and stasis."

That the primary acceleration of the blood-stream is in some way dependent on reflex nerve action seems clear. At this point, our researches into the essential phenomena of inflammation may cease. A few physiological facts demand consideration before I sum up what *a priori* reasoning indicates as to the therapeutics of the early stages of inflammation. Ranvier has shown that the white-blood cell is sluggish, and then ceases to move in the absence of oxygen, and is active in proportion to the amount of that substance present. It is also indisputable that the red cells are the main carriers of oxygen, and that if their numbers are relatively increased to the fluid in a given bulk of blood, especially if, as in inflammation, both the necessity and capability of the cells of the tissue making use of the oxygen are removed, at once an excess of oxygen obtains, *i. e.*, an increased amœboid action of the white cells not only is possible, but becomes a necessity. Physiology teaches us that only so much of the constituents of the blood-plasma exude or are withdrawn by cell-action as suffice for the normal function of the parts, and that, if any excess is present, that the lymph-spaces return it into the lymphatics, whence it passes into the general circulation. If, however, the lymph-spaces are compressed by dilated bloodvessels, and crowded with migrated cell-elements, the excess of pabulum must be retained, with a consequent stimulus to undue cell-proliferation. Precisely this obtains in inflammation. But physiology likewise shows us that there is a certain attraction exerted upon the blood-current by the tissue-cells according to their varying wants which not only aids the *vis-a-tergo* action of the heart, but actually determines to a certain extent the amount of blood present at any given time, for instance, in a gland. If this action obtains in health, there is no reason to doubt it is still more potent in disease. From the physiological fact upon the one side that only so much pabulum is withdrawn as suffices for healthy function, and, on the other, that in inflammation this material is in great excess, it seems proven, viewed from the light thrown upon the subject by the experiments of Ryneck and Weber, that, in some way, the capillary walls are injured by intra-vascular pressure.

To summarize: (1) Intra-vascular pressure injures the vessel-walls, aided, perhaps, by the constant passage of the white cells; in consequence, an inordinate amount of blood-plasma exudes, which stimulates cell-proliferation. (2) The accumulation and stagnation of the red-blood cells, with the draining-off of the liquor sanguinis, cause a relative excess of oxygen, which excites to increased

amoeboid action the white-blood cells and their consequent migration. By the study of the phenomena of osmosis, we learn that stagnation of fluid and intra-vascular tension induce outflow; but reverse the latter condition, increase the rapidity of the circulation, and, with the constitution of the blood, an outflow must result.

From these studies I am forced to conclude that a theoretically perfect remedy for incipient inflammation must comprehend the following effects. It must either lessen the *vis-a-tergo* of the heart's action—so as to prevent injury to the vascular walls by over-distention and the consequent outpouring of liquor sanguinis; it must prevent such an ingress of blood into the affected area as would produce the excess of oxygen, the migration of cells, the blocking up of the lymph-spaces, etc.; or what would practically amount to the same thing, it must so lessen the difficulty of escape on the venous side, that howsoever great the *vis-a-tergo*, a ready draining off, nay, aspiration, as it were, of the venous blood may occur; if possible, both these effects must be produced. The last requisite would be that the remedy must increase the frequency while it lessens the force with which the heart acts, for although, whatever, would lessen the *vis-a-tergo* would prevent any further outpouring of pabulum, yet that which was already exuded must remain, and would have to be consumed before the initiated cell-change could cease. In my experiments on the frog's tongue I noted all the vascular changes described in the earlier part of this paper. When the stasis was complete, a large vein on the distal side was divided, *i. e.*, local bleeding was effected from the vessels directly leading from the inflamed area. I purposely avoided opening the vein on the cardiac side of the phlogosed spot lest I might simultaneously divide the supplying artery. By severing one of the ranine veins at a point where I could distinctly see that the venous radicles of the inflamed area emptied, I achieved my purpose without further damage.

The effect upon the obstructed vessels was first an oscillation of the blood disks, then an occasional momentary flow of blood, then suddenly a rapid resumption of the circulation sweeping out the bloodvessels, and apparently restoring them to their normal condition, except at spots where the agents inducing the inflammation had chemically destroyed the vessels or coagulated their contents. I do not presume to say that the white corpuscles betook themselves at once back again into the bloodvessels, for I did not use sufficient amplifying power to observe this, nor was I then dealing with any other processes than the vascular changes. I should have carried my researches much further had I not seen that nothing was needed beyond a mere corroboration of Gensmer's admirable paper, which I shall now quote:

"At the present time it is generally accepted, that by local bleeding inflammatory stasis is relieved, but this view has not been demonstrated; many adhere to the derivative action of bleeding and many still believe in the loss of blood as such, in the amount of blood drawn. The web of the

foot of a curarized frog, was burnt with a red-hot pointed needle, or with nitrate of silver." . . . "As soon as" . . . "slowing of the current and stasis had taken place, a leech was placed near the hock-joint." . . . "As soon as sucking began, the picture under the microscope changed in a striking manner. The blood-current was immediately accelerated, blood corpuscles which adhered to the wall passed into the blood-current, stasis was relieved, briefly, the inflamed capillary loops were in a short time, sometimes in a few minutes, entirely free, and presented in a few cases at the termination of the experiment, the appearance of a perfectly normal and even accelerated circulation." The authors were unable positively to determine whether the migrated white-blood cells "were in any way influenced by the bleeding." Owing to the tardy rate with which the blood was effused after scarification, the author stated that the good effects were not comparable to those of leeching. In like manner general bloodletting by opening an abdominal vein was inferior to leeching near the affected area. Dr. Gensmer considers it proven "that the antiphlogistic effect of local bleeding is due to a purely mechanical cause. Through the stronger current caused by the sucking of the leech (or by a cupping-glass, or by scarification) is the blood corpuscle which adheres to the wall in the inflamed territory torn away, the obstructed capillary perfectly opened and there is a normal, indeed a temporarily stronger circulation established." . . . "Local bleeding prevents stasis. Bleeding not only does not cause local anæmia, but even occasions (of course transiently) arterial hyperæmia, that is, it causes a more intense flow of arterial blood to the inflamed point. Further, this abundant supply of arterial blood results in a better nourishing of the tissue, and that, therefore, the tissue is better able to withstand the effects of the inflammatory process is to be expected. It further follows that the antiphlogistic effect of bleeding depends upon the quantity of blood drawn, and that in the first place only the rapidity of the current is to be considered. Evidently the bleeding must take place when possible between the inflamed point and the heart, and not far from the former."

What the effects of bloodletting are upon the general circulation has an important bearing upon the subject we are now discussing. According to the latest authority, "The water is increased, and the globules," . . . oxygen carriers, "are diminished in relative amount." . . . "The action of the heart becomes *more rapid* and its force lessens"—the italics are mine—"the arterial tension falls." But how about the evil effects of bloodletting? "It is a remarkable fact perfectly well known to old practitioners, and to which Sir James Paget has recently called attention, that the ill-effects of bleeding in healthy subjects are very temporary and easily repaired. The blood globules, which are relatively more affected by bleeding than

<sup>1</sup> Dr. Alfred Gensmer Halle. Centralblatt für die medizinischen Wissenschaften, April 1, 1882.



the other constituents, are quickly reproduced."

As surgeons, we must all have had ample proof of this fact. Some years since while pursuing other investigations upon human blood, I observed the same fact and noted it in the published report of my work. I need hardly point out, that if my experiments with those of Gensmer's are reliable, and the other facts quoted are really facts, our ideal remedy is found. From the quotations given of Gensmer's paper, it is clear that our experimental results exactly tally. I think, however, that the superior advantages of leeching over scarification, etc., can hardly be similarly obtained in the human subject since the relative size of the leech to the frog must have had a considerable share in effecting the good obtained by an actual aspiration of the blood. In my own experiments, by dividing a large vein in the tongue, I obtained the effect of bloodletting pure and simple. To produce the best results, then, we should, when possible bleed from one of the principal veins leading from the inflamed focus. When this is impossible, leeching or wet-cups should be resorted to, since by both the mechanical effects of aspiration are superadded to the mere outflow of blood. But many authorities maintain that bloodletting can be dispensed with in all cases, for exactly the same results are obtained by the use of arterial sedatives. To test the truth of such statements it is only requisite to experimentally induce inflammation, and then give a large dose of gelsemium.\* The arteries are seen to become smaller, the current slower, and if stagnation has already occurred, it increases or remains stationary. This and similar remedies then reverse that which both upon theoretical and experimental grounds we have found to be most effectual. They certainly also interfere with the rapid absorption of effusions.

From a review of the facts set forth in this paper, I think I am warranted in stating the following propositions as the logical and practical outcome of my investigations:

(1) During the stage of dilated arteries, with increased rapidity of the current, but little danger of capillary changes with exudation need be apprehended, and here perhaps ergot, certainly arterial sedatives do good, either directly or indirectly, without bloodletting, by reducing the size and rapidity of the current, thus allowing the veins of the irritated area time to empty themselves, even of an unaccustomed amount of blood. Thus if vascular-pressure changes have taken place, the vessels have an opportunity to return to the norm.

(2) After stasis has occurred, or while it is occurring, weakening of the heart's action and a diminished volume of the current—*e. g.*, the effect of arterial sedatives—can do nothing but harm to the inflamed area, although, for the reasons given in proposition 1, it may prevent extension of inflammation in the circumjacent parts, which are merely in the earlier stages of congestion.

(3) The results to be sought, and which are secured by local bloodletting, are removal of the blood on the venous side, so that the vessels can not only empty themselves, but a certain amount

of *vis-a-fronte*—*i. e.*, aspiration—is invoked: this secondarily results not only in a temporary return to the norm on the arterial side, but an increased rapidity (and here is an important point)—lessened force of the circulation. The acceleration of rate without the weakened force of the circulation would further damage the vessels, instead of which the increased rate of the current merely serves to sweep out the accumulated red-blood cells, the cause of the excess of oxygen, and the consequent cell-migration. The vehement current also induces a rapid resorption of the effused liquor sanguinis, at once the stimulator to growth, and the food of the cells. This latter advantage is not founded on theory alone, for it is a matter of common observation that the mere amount of blood extracted produces no sensible effects on an inflamed breast, for instance, *at first*, but in a few hours, the skin, if carefully examined, has become wrinkled, and the organ shrunken. This effect is secondary to the loss of blood, and chiefly results from the absorption of the inflammatory exudate.

(4) Arterial sedatives in the later stages are usually inadmissible except as succedanea to bloodletting, as far as the focus of inflammation is concerned: the surrounding parts, which are merely congested, may be benefited by their exhibition. After bloodletting, they act favorably, because, when the stasis has been overcome, they lessen intra-vascular pressure, and thus permit the blood-vessels to recover their normal condition. They also alleviate pain by lessening the bulk of blood in the part—*i. e.*, they relieve nerve-pressure.

As before intimated, this essay is in reality little more than a few notes on the effects of local bloodletting, and does not pretend to cover the extended field of either the local or general treatment of inflammation. If my remarks prove fruitful in the way of an instructive discussion, which may induce some of my hearers to resort anew to this useful but neglected remedy, I shall feel amply rewarded.

## MEDICAL PROGRESS.

### INJECTIONS OF ARSENIC IN GENERAL SARCOMATOSIS.

—PROF. KÖBNER reports a case which still further confirms the value of Fowler's solution of arsenic in cutaneous diseases. Two years ago, the patient, who was eight and a half years old, and has always been delicate, developed sarcomatosis of the skin, which gradually spread, until almost the whole cutaneous surface was affected. Köbner commenced injecting Fowler's solution in distilled water, in proportions of one to two; from two and a half to four drops of the arsenical solution being used at each injection, thrown under the skin or into the muscular tissue of the gluteal region, and into the stroma of some of the larger tumors. In three months five injections were made, 3ij of Fowler's solution being used. At the end of three months the tumors were considerably diminished, having disappeared in some places, leaving a brownish cicatrix. Equal parts of the arsenic solution and distilled water were then used, six to nine drops being injected; in about forty days 3iv of Fowler's solution being used, with progressive amelioration of the symptoms, the lymphatic glands being greatly reduced in size, and the liver and spleen reduced to the

normal diameter. The quantity injected was then gradually reduced, and in one year from the commencement of treatment, nothing was left of the disease except a few cicatrices showing the former position of some of the larger tumors.—*Gaz. degli Ospitali*, May 13, 1883.

**SUCCUS CONII IN CHOREA.**—DRS. CLIFFORD ALLBUTT, EDDISON, and CHURTON have obtained good results in the treatment of chorea, with violent movements, by large doses of succus conii. The patients took from 3ij every hour to 3ss every four hours during two or three days. It was given sometimes alone, sometimes in combination with morphia or bromide of potassium. It seems that the best results would be obtained by large doses at first, until the system is thoroughly under its influence, when smaller doses, frequently repeated, will keep up its action. No toxic effects were ever noticed in these cases. The cases seem to show: 1. That the drug, to be of any service, must be given in large doses. 2. That its action must be sustained by frequent repetitions of the dose at short intervals. The uncertainty of the action, of given specimens of succus conii necessitates great care in its administration, and militates against its general adoption. But cases in which neither chloral nor morphia have any effect may arise, and in which, as in the above, succus conii may prove efficacious.—*Lancet*, May 26, 1883.

**GELATINE TEST FOR ORGANISMS IN WATER.**—DR. ANGUS SMITH, of Manchester, has recently brought forward this new test for the detection of organisms in water. It consists in rendering the water thick by dissolving gelatine in it. If pure, the gelatine cylinder remained long unaltered; but if the water be impure from the presence of organisms, the gelatine round the organisms becomes liquefied and globular, the organisms remaining solid at the bottom of the spheres.

Dr. Angus has prepared photographs of test-tubes of water which had been thickened by a solution of the purest fish-gelatine, and then exposed to the action of light. When the water was pure it remained translucent; but when bad, bubbles were rapidly formed, and the bacteria which appeared to be in the water began to act on the gelatine, breaking it up and rendering it soluble. A rapid movement of gas was observable. When the bubbles or balls appeared to be spherical they were aggregations of bacteria. This change took place quickly—almost in twenty-four hours. But a peculiarity of the test was this: that it was only applicable where infusorial animals were present. For instance, peaty water in which there were no animalcules or bacteria would stand without breaking up the gelatine. In order to change the gelatine bacteria must be present. Organic matter that is not putrescent or infective will not do it.—*Med. Times and Gaz.*, May 26, 1883.

**TURPENTINE VAPOR-BATHS IN GOUT AND LITHIASIS.**—M. BRÉMONT, FILS, has recently submitted a memoir on this subject. The turpentine employed is that of the cedar, and its vapor is absorbed by the skin from a vapor bath. That the remedy is absorbed is proved by the fact that the urine acquires the characteristic odor of the turpentine. During the first five or six days of the treatment there was a marked increase of sand in the urine of patients with uric diathesis, but this phenomenon does not indicate an exacerbation of the affection, for the quantity of sand rapidly diminishes after this and finally disappears entirely. These happy results persist for a long time after the vapor-baths are discontinued.—*Gaz. Hebdom.*, May 4, 1883.

**BACILLUS OF TYPHOID FEVER.**—PROF. EBERTH, of Halle, has recently written a paper on the bacillus of typhoid fever, in connection with one from Volkmann on the bacillus of typhus. It is well known that Klebs has already published the results of his researches on this subject. According to Eberth, these bacilli differ from others by their rounded extremities, and by their feeble power of absorbing staining matters. They are smaller than tubercle-bacilli; they are present *en masse* to a less degree in ganglia, and contain small cellular-like bodies, which are, perhaps, spores. These are not the only organisms found in typhoid, seven other species being differentiated. Nuclear infiltration of the intestines, ganglia, and spleen contained a great number of them. In one case, when the disease was at its apogee, their number was greatly diminished, which may explain the negative results in a number of cases. Eberth found the bacilli eighteen times in forty cases. He is supported by the results of Klebs, Koch, Meyer, and others. In twenty-four various affections, of which twelve were cases of intestinal tuberculosis, the bacilli of typhoid were not once found; Meyer, in six cases of scarlatina, measles, and diphtheria, was equally unsuccessful in searching for them. Eberth believes that the bacilli are most constant in the intestinal mucous membrane and in the mesenteric glands, whence the blood-current carries them to the spleen. So far, attempts at cultivation and inoculation have not been successful. [The experiments of Maragliano, of Genoa, have already been published.]—*Progrès Méd.*, May 19, 1883.

**CHLOROFORMIZATION DURING SLEEP.**—In the *Medical Record* for April 28, 1883, DR. JOHN H. GIRDNER takes the ground that chloroform narcosis cannot be produced during sleep, and supports his position by giving the details of five trials, all failures. The chloroform was poured on a folded towel and held about eight inches from the sleeper's face. One of the persons experimented upon awoke at the end of two minutes, the others in three. DR. DAVIS HALDERMAN, in a letter to the *Medical Record*, June 2, 1883, on this subject, quotes cases which show conclusively that chloroformization can be produced during sleep, and that the chloroform should be administered from a handkerchief held, at first, about twelve inches from the sleeper's face, and gradually brought nearer; though in two cases reported in the *Pac. Med. and Surg. Journ.*, Jan. 1874, the anæsthetic was poured on a piece of surgeon's lint and held as near to the face as possible without actual contact; both cases were successful. Dolbeau made twenty-nine experiments, with a view to determining this question, on persons of both sexes and of various ages; ten were completely successful. Dr. Girdner's experiments were all made in the same manner, although all were failures, and it is justly remarked that under these circumstances different methods should have been tried.

**BACILLI OF TUBERCLE.**—M. COCHEZ, who has made numerous investigations on the presence of the bacilli tuberculosis in sputa, has come to the following conclusions: 1. An examination of the sputa of tuberculous patients shows the constant presence of the bacilli. 2. The larger or smaller number of these elements may furnish data regarding the progress of the disease. 3. The absence of the bacilli, established at several different times, is strong ground for rejecting the diagnosis of tuberculosis. 4. The sputa of phthisical patients constitutes a favorable medium for the culture of tubercle-bacilli; hence it is necessary to take careful antiseptic precautions to prevent their propagation.—*Gaz. Hebdom.*, May 25, 1883.



# THE MEDICAL NEWS.

A WEEKLY JOURNAL  
OF MEDICAL SCIENCE.

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SATURDAY, JUNE 16, 1883.

## COMPLICATIONS OF EXOPHTHALMIC GOITRE.

THE classical symptoms of exophthalmic goitre are sometimes diversified by other nervous disturbances. The rapid and irregular action of the heart, the enlarged thyroid, the dilated cervical vessels, and the protrusion of the eyes, constitute the quartet of symptoms which give to this disease its special characteristics. Besides these necessary symptoms, there are accidental complications, which impart variety to its monotonous symptomatology. These complications may be in the mental or moral sphere, or may involve the motor and nutritive functions.

Trousseau was the first to recognize the changes in the character and disposition which in some cases distinguish this disease. We have encountered a case in which the appearance of the malady seemed to be due to a profound moral emotion. A lady, just before retiring, received some distressing intelligence; in the morning, to her extreme amazement, her appearance was so changed as to be scarcely recognizable, in consequence of a considerable exophthalmos and enlargement of the thyroid. In another case, during the course of the disease, various kinds of morbid fear, melancholia, and wakefulness, were pronounced symptoms. In all the cases which we have observed, there were various changes of the disposition, as distrust of others, fretfulness, morbid self-consciousness, etc.

The moral perversions are less important than the epileptiform, but the latter are much less common. Dr. Ballet, in a communication which we find in the *Revue de Médecine*, of April 10, 1883,

has been able to collect five cases, in addition to the observation of Gildemeester, which is usually referred to by the writers on this topic. In the first case, the epileptic seizures which had occurred for many years disappeared when the exophthalmic goitre came on. Dr. Ballet's cases are divisible into two classes: those in which the convulsive seizures and the exophthalmic goitre succeed and supplant each other; those in which the two maladies continue separately in the same individual.

Of the five cases whose histories are given in detail, there is one corresponding to Gildemeester's, in which attacks of epilepsy ceased when exophthalmic goitre appeared; and one in which these phenomena were reversed. In the second group of cases, the convulsive seizures appear to have the relation of epiphenomena, and grow out of the circulatory disturbances belonging to Graves' disease. The epileptic attacks are not habitually present; the disease is exophthalmic goitre, and this has, as an accidental complication, the convulsions.

Many cases of Graves' or Basedow's disease have been complicated with paralysis, with hemiplegia, and with paraplegia; others with hysterical paraplegia, hemianæsthesia, and similar hysterical affections. They may therefore be durable or permanent, or temporary; in the former dependent on structural changes; in the latter due to mere functional disturbances. From these facts it may be concluded that there are probably two types of this affection. Clinically, this appears highly probable. There are cases of exophthalmic goitre which occur suddenly, which behave in their course as other neuroses, and are not accompanied by any organic changes; there are others which develop slowly, and manifest by the permanence of the lesions, actual and complicating, the permanent character of the affection. As respects the latter, it is an interesting fact that Filehne has produced the trinity of symptoms of which this malady is composed by experimental lesions of the restiform body.

Another group of complications are those which involve the nutritive functions more especially under the control of certain nerve-centres. These are polyuria, diabetes, and albuminuria. These affections are by no means unfrequent complications of exophthalmic goitre. They are, properly speaking, epiphenomena, and they serve to ally this disease on the one hand with the organic affections of the nervous system; and this relation may help to explain the affiliations of polyuria, diabetes, and albuminuria with each other. Of these complications, diabetes is held to be the most common. In a case which has occurred under our observation, in a young man, exophthalmic goitre, in a perfectly typical form, succeeded to an attack of albuminuria, so that when the former was fully developed, the

latter had disappeared. On the disappearance of the albuminuria, a notable quantity of sugar was found in the urine, which was then passed in considerable amount.

In a recent discussion on diabetes, which has occupied the Pathological Society of London for several weeks, the origin of the disease in structural changes in the brain, notably along the floor of the fourth ventricle, met with little favor, and indeed appeared not to be sustained by the pathological evidence. The facts there given supported strongly that view of diabetes which refers it, as Pavy does, to chemical changes in the blood. The remarkable way in which exophthalmic goitre is related to certain complications, and the transmutations which occur between them, seem to indicate a community of origin, and a common source of pathological affinity, seated in the pons and medulla.

#### SEWAGE POLLUTION OF WATER SUPPLIES.

IN the annual report, for 1882, of the Chief Engineer of the Water Department to the City Council of Wilmington, Del., we find a carefully prepared paper by Prof. Leeds, of the Stevens Institute, giving the results of an investigation into the water-supply of the city. Prof. Leeds describes the methods of analysis by which his results were obtained, and for the benefit of those who are not familiar with sanitary chemical work, he explains what is meant by a "standard of purity," and interprets his results by a comparison with such a standard.

There is no doubt that the chemist can determine with the utmost exactitude, exceedingly minute quantities of the elements of organic matter existing in water, and if these quantities do not exceed those which have been found in water of similar origin and history, which daily experience shows to be wholesome, he may consider himself warranted in classifying the water yielding such results as pure, but its wholesomeness can only be assumed, for the poison of fever or other specific disease may exist in it, undetected by the chemical tests. It is very probable that a water containing such minute quantities of organic matter is wholesome, but its wholesomeness does not follow from the laboratory results. On the other hand, if the quantities found exceed those which may be considered normal to waters of similar origin, he may be warranted in classifying the specimen under investigation as impure, but it by no means follows that it is therefore unwholesome. It is true that there is a greater probability of the presence of a specific disease-poison where there is much organic matter present, than where there is not much, but it is only by assumption that the unwholesomeness can be predicated.

It was not, however, to point out the distinction between impurity and unwholesomeness, so apt to be forgotten by the chemist, that we referred to Prof. Leeds's report, but to indicate what seems to us, as medical men, a danger to which false economy and the restricted scope of the chemist's laboratory tend to expose us. It is well known that running water becomes purified in its progress. "I hold, therefore," says Prof. Leeds, "that the statement so frequently made, that water once polluted by sewage cannot again become safe for drinking purposes after flowing any number of miles, is contrary to our common experience and observation." He instances the Passaic, which although contaminated by the sewage of Paterson, N. J., a town of fifty thousand inhabitants, returns to, or nearly to, its normal standard of chemical purity at a point sixteen miles below, where it is pumped up for the supply of the three hundred thousand inhabitants of Jersey City and Newark. Organic matter, generically speaking, becomes oxidized during the flow, and disappears transformed into harmless ammonia, which is evanescent, or into equally harmless nitric salts; but there are grounds for belief that the poisons of specific disease are less susceptible to oxidizing influences, and their particles may be present in full virulence although widely separated by the large mass of the flowing stream. Filtration through the soil is infinitely more efficient as an oxidizing process than surface flow, yet there are many lamentable examples of percolation of typhoid sewage into wells where the oxidation has failed to destroy the noxious organic matter.

From the medical point of view, the water of a stream which has been contaminated by sewage ought not to be used as a general supply on the dictum of the chemist until he can show that the specific poison is destroyed by its course of sixteen miles, as surely as the mass of organic matter which accompanies it, or until the medical statisticians can inform us that typhoid fever and other diseases known to be propagated by means of water, do not prevail in cities which trust to purification by surface flow.

#### THE HEALTH OF THE GRADUATES OF WOMEN'S COLLEGES.

IN our issue for October 14, 1882, we commented on the differing opinions as to the health, good or bad, of women who had gone through a college course, and said: "If the future mothers of our country are being ruined physically by our methods of education, who would wish, with such downright earnestness of purpose, to remedy the impending evil as our educated women themselves? If a false cry is being raised which will hamper the just and wholesome intellectual development of



women, who are more interested in showing it than the graduates of our women's colleges?" We commended the matter to the "Association of Collegiate Alumnae," and urged a fearless and a thorough examination of the facts.

We are glad to see that our suggestion has been acted upon. The Committee of the Association on Health Statistics, consisting of representatives from twelve colleges for women, has just issued a blank form for a "health return" from each "alumna," on the back of which the two sentences we have above repeated are quoted. The document is rather formidable in length, covering fifty questions under these seven headings: Conditions of Childhood, Individual Health, Family Health, College Conditions, Conditions since Graduation, if dead, the Cause and Date of Death, Special Statements. Nothing of importance seems to have been omitted, as to the graduates. But we see no evidence that measures are to be taken for obtaining the number of students who have been compelled to leave college on account of failing health, and the proportion it bears to the whole number of students. This is one point as to which there has been so much criticism that we think it ought on no account to be omitted.

One other point is of the utmost importance: *The results must be stated with absolute accuracy, no matter which side they may favor.* Theories must yield to facts. Dangers to health must be uncovered and remedied, if they exist, or, if falsely asserted, it must be so stated upon a firm foundation of facts. "Mehr licht" is what we want, and it seems we are going to get it.

#### THE APPLICATION OF RESORCIN IN THE TREATMENT OF CHANCER.

DR. LEBLOND has recently employed, in his service at St. Lazarus, as a topical agent, resorcin, in the treatment of chancre, mucous patches, urethritis, and vaginitis. As regards soft chancre, Dr. Leblond finds that resorcin is more efficient in securing cicatrization of a soft chancre than iodoform, and the duration of the treatment is shorter. It is the more desirable in these cases, since it is free from odor, and does not cause any symptoms of toxæmia, even when used in considerable quantity. The local effect of resorcin, when applied to a fresh wound, is caustic, but the action is very superficial; the surface is whitened because of the coagulation of the albumen, but the parts beneath are unaffected. If a pinch of resorcin, moistened, is placed on the lips, a whitish spot of vesication is produced, but the effect is limited to the epithelium.

By Dr. Leblond, for the purposes above indicated, resorcin is applied in powder, and also in solution. The solution is prepared by dissolving resorcin in the proportion of twenty-five per cent. in distilled

water. The application of this is made by suitable dressings three or four times a day. When pure resorcin is employed, it is thoroughly dusted over the affected surface. The pain is not severe, and soon subsides. The first contact is accompanied by smarting, and resorcin, which is so closely allied to carbolic acid, does not have the same power to lessen the irritability of the sensory nerves.

Take it all in all, resorcin is a promising substitute for the offensive, if efficient, iodoform. If Dr. Leblond's observations are confirmed we have a valuable resource in this remedy. As its production is not difficult and its cost comparatively low, there seem to be ample reasons for its employment.

#### THE CHILDREN'S COUNTRY WEEK.

WE have before us the Sixth Annual Report of the Association thus appropriately named. It is most delightful reading, partly because it is short, partly because it details such practical religion, and not least because the subscription list covers more pages than the report itself.

Few charities are more deserving of hearty support. Like the poor, the children we have always with us, and doctors are the very ones who appreciate most of all the physical as well as the higher benefits to be derived from such a change as a week in the country. To many of the little sick folk in whom our drugs can oftentimes work but little change, God's pure oxygen, the green fields, the barn, and the hay-mow are the tonics to fill their bloodvessels and tan their cheeks.

The Philadelphia Association gave over 1800 persons an average of nine days in the country, and nearly 17,000 were sent on day excursions. The average cost the previous year was twenty cents for the latter and \$2.20 a week for the former. The economy of administration is marvellous, as it was only four and one-half per cent. of the receipts!

After a careful personal inspection by a committee, thirty-five boarding-houses were selected to supplement the too scanty private invitations. Usually these were respectable farmers who received from four to six boarders each. All of the children were inspected to see that they were free from contagious disease, and as far as possible of good personal character; and each small child was labeled with a tag bearing its home address and destination, while postal cards properly addressed were provided so that the Association and the parents were informed of its safe arrival. Each child, also, was met on its return by a proper escort.

We call the attention of the profession to this charity, that they may avail themselves of it for the suffering little folk in the approaching summer, and also, that they may commend its treasury to their friends.

## SOCIETY PROCEEDINGS.

### THE AMERICAN MEDICAL ASSOCIATION.

*Thirty-fourth Annual Meeting, held at Cleveland, Ohio,  
June 5, 6, 7, and 8, 1883.*

(Specially reported for THE MEDICAL NEWS.)

(Concluded from page 663.)

#### GENERAL SESSION.

FRIDAY, JUNE 8TH, FOURTH DAY.

THE Association was opened with prayer by the Rev.

Chas. Terry Collins.

First in order were

#### AMENDMENTS TO THE CONSTITUTION.

DR. N. S. SMITH, of Dakota, offered an amendment to the Constitution to the effect that two delegates should be received from the Medical Department of the Indian Bureau; these delegates to be nominated each year by the Surgeon-in-Chief of the Bureau, and appointed by the Secretary of the Interior.

The amendment was laid on the table.

The Secretary read an amendment offered by Dr. Toner, the purpose of which was to abandon the office of Permanent Secretary.

DR. TONER arose, however, and withdrew the amendment, because he had learned that the salary of the Secretary was an honorarium, and as the establishment of the Association Journal relieved that officer of the duty of editing the volume of Transactions, the Association would be saved that expense without the passage of the amendment he proposed.

The amendment of DR. J. H. SEARS, of Arkansas, providing that the Chairman and Secretary of any Section may at any time add to their number such recognized and able workers in addition to those named by the Nominating Committee, received strong opposition, and was laid on the table.

The Secretary being requested to read the amendment offered with regard to the admission of new members, Dr. Toner stated that in the opinion of the Judicial Council none of the methods proposed for the admission of members were wise or expedient, and that therefore the amendment had been withdrawn.

DR. J. W. SMITH, of Iowa, offered as an amendment that the words, "without the right of voting," be stricken from the clause respecting permanent members.

DR. N. S. DAVIS spoke at some length upon the impropriety of such an amendment. He said it gave any man the right, no matter how unfit his abilities or how incapable of becoming a delegate from his home Society by reason of any misdemeanor, dishonesty, or indebtedness, to come to the meetings of this Association and by paying his dues there vote upon all questions, and he was confident the end would be disastrous. Further, he said, he was confident that there was not now a permanent member present who would insist upon the passage of this amendment, if he but allowed himself to consider all the important principles it involved.

The resolution was indefinitely postponed.

Next in order was the

#### REPORT OF THE JUDICIAL COMMITTEE,

which was read by Dr. N. S. Davis,

In regard to the petition of Dr. D. W. Day, asking for a rehearing of his case, which was adjudicated last year, the Council ordered the return of the petition to Dr. Day, with leave granted to supplement said paper by a written statement of the character of the new evidence which he proposes to introduce, and the Council decline to act upon the case until the opening of the session next year, from the impossibility of notifying all the parties concerned.

IN THE CASE OF DR. D. H. GOODWILLIE, OF NEW YORK, who signed *under protest* the clause of submission to the Code of Ethics printed upon the registration blanks, the Council decided that the registration of Dr. Goodwillie be cancelled, and the annual dues be returned to him.

The report was accepted and the recommendations adopted.

#### EXAMINATION OF RAILWAY EMPLOYÉS.

DR. FOSTER PRATT, of Michigan, offered a resolution that the Legislature of each State be petitioned to enact a law at their next annual session, to require all railroad employés to be examined as to the hearing of the watch, voice, bell, and whistle, before being admitted to railroad service.

A resolution was offered also, petitioning Congress to provide means for securing a more efficient

#### MEDICAL ATTENDANCE ON OCEAN STEAMERS.

A committee was appointed for this purpose, consisting of Drs. A. N. Bell, New York; A. L. Gihon, U.S. Navy; J. N. Quimby, New Jersey; H. O. Marcy, Massachusetts; and H. H. Smith, Pennsylvania.

#### CLASSIFICATION OF PAPERS.

DR. A. N. BELL then introduced the following resolutions:

*Whereas*, The practice prevails of reading papers before the several Sections at the option of their authors, without sufficient regard to the special objects for which the Sections were created, therefore,

*Resolved*, That all papers hereafter offered or intended to be read before the Association, or any of its Sections, except the Addresses of the president and chairmen of the sections, shall be first referred to the trustees of the *Journal* for classification and appropriate references.

An amendment to refer these resolutions to the Committee of Arrangements was proposed by Dr. Toner, and lost, and the original resolutions were then adopted.

DR. BRODIE, of Michigan, introduced the following resolutions

#### ON THE DEATH OF SURGEON-GENERAL BARNES:

*Whereas*, The Association takes a deep interest in the efficiency of the Medical Department of the United States Army, and

*Whereas*, The late chief of the Department, Surgeon-General Joseph K. Barnes, contributed largely to the efficiency of this Department in the work which it has been and is doing for medical science and education, therefore

*Resolved*, That the Association receives with profound regret the information of the death of General Barnes, and desires to record its appreciation of the great value and importance of the work which he has done, and enabled others to do for the advancement of medical science.

*Resolved*, That this Association recognizes the energy and ability which characterized the administration of General Barnes and his services in connection with the Army Medical Museum and Library and publication of the *Medical and Surgical History of the War*, and other works of great value to the profession.

*Resolved*, That a copy of these resolutions be sent to the Surgeon-General of the Army.

These resolutions were adopted and ordered spread upon the minutes.

#### CREMATION.

DR. J. M. KELLER, of Arkansas, offered a resolution that in the very near future, if not now, cremation will become a sanitary necessity in the large cities and populous districts of the country. Referred to the Committee on Hygiene.



When the *Address on Diseases of Children*, to be delivered by DR. R. M. BLOUNT, of Indiana, Chairman of the Section, was called for, it was found that he had left the city, and had made the request that his paper be referred without reading to the Publication Committee, and it was so referred.

DR. QUIMBY, of New Jersey, offered a

#### RESOLUTION OF THANKS

to the citizens of Cleveland for their unlimited kindness in the manner in which they have received the delegates and entertained them during their stay. Unanimously adopted.

#### ADDRESS OF THE RETIRING PRESIDENT.

THE PRESIDENT, DR. JOHN L. ATLEE, of Pennsylvania, then arose and said:

GENTLEMEN OF THE ASSOCIATION: In retiring from the chair to which you have elected me, I had hoped to have the pleasure of introducing to you my successor. But I assure you that it is with great satisfaction that I transmit the place to him, for he is a gentleman worthy of it; a gentleman who has done as much for the medical literature of the country as almost any other one, and one whom I characterized a few days ago as the Lænnec of America. I thank you for the support you have given me, and I can only ask that you forgive my shortcomings. I bid you an affectionate farewell.

He then introduced the Second Vice-President, Dr. Lester, in the absence of Dr. Austin Flint, who had been called to New York the night before.

#### THANKS TO DR. ATLEE.

DR. GARCELON, of Maine, offered the following:

*Resolved*, That the thanks of the American Medical Association be extended to the retiring President, Dr. Atlee, for the able, dignified, and satisfactory manner in which he has presided over the deliberations of this assembly; and that he retires with the best wishes of every member of this Association for a long continuance of a life so highly useful not only to the present but to all future generations.

Unanimously adopted.

The Association then adjourned, to meet in Washington, D. C., on the first Tuesday in May, 1884.

#### EXCURSION.

In the afternoon the delegates remaining in the city with their wives, in all about six hundred, were conveyed by a special train over the Nickel-Plate Railroad to the elegant residence of Mr. and Mrs. D. P. Eells, at River Bank, a beautiful little promontory on Lake Erie at the outlet of Cuyahoga River. After an hour or two of rambling through the grove and viewing the lake, refreshments were served, and the guests were again returned to the city in time for the evening trains over the various railroads.

#### SECTIONS.

SECTION OF PRACTICAL MEDICINE, MATERIA MEDICA, AND PHYSIOLOGY.

WEDNESDAY, JUNE 6TH, SECOND DAY.

DR. THOMAS N. REYNOLDS, of Detroit, read a paper

THE ALIMENTARY CANAL IN BRONCHITIS AND PHTHISIS.

He said that the abnormal condition of the alimentary canal and portal and lacteal systems was often the predisposing cause of both acute and chronic affections in all parts of the respiratory apparatus. Speaking only of bronchitis and phthisis, acute tracheo-bronchitis was often caused by excess in diet, with proportionately incomplete elimination. In view of

this fact, the treatment should be prompt, and include evacuation of the bowels and restriction of the diet to a light liquid form. Necessary quiet and warmth of the surface should be maintained, but the atmosphere of the room should not be too warm. The cathartic, hot drinks, and a warm surface produced a revulsion of nervous energy from the inflamed part to the bowels, kidneys, and skin. He deprecated the use of ordinary cough mixtures to the exclusion of this more rational treatment. Morphine, quinine, aconite, and veratrum viride were the more usually appropriate remedies in the first stage, but did not equal the treatment without drugs to which he referred.

Catarrhal and fibroid phthisis most frequently were the result of neglected chronic bronchitis, and should be treated in much the same way, not by cod-liver oil or any other supposed specific alone, especially if they interfered with digestion; but quinine was useful in lowering temperature and lessening the secretion of pus, and the patient should cultivate an out-door life with plenty of physical exercise and wholesome mental occupation. Under this regime, digestion and tissue-building soon went on properly, cavities often healed, and recovery became complete. Any region free from malaria or unwholesome emanations, with a temperature permitting constant out-door life, would answer for a resort. Tubercular phthisis had sometimes seemed to be excited by neglected bronchitis in those of tubercular family history and of constipated habit and general defective elimination, and who lived an inactive in-door life.

In dyspepsia, with constipation and septic fermentation of the ingesta, it seemed probable that the septic products might be carried by the portal and lacteal vessels direct to the capillaries of the lungs, and be there sometimes auxiliary in causing bronchitis and phthisis in any or all of their forms.

DR. BELFIELD, of Illinois, then read a paper on the *Germ Theory of Disease, with Micro-photographic Illustrations*; and DR. SHOEMAKER, of Pennsylvania, read a paper on *Mechanical Remedies in the Treatment of Skin Diseases*.

DR. L. B. TUCKERMAN, of Ohio, followed, with a paper on a

NEW METHOD OF OBTAINING PURE PANCREATIC JUICE.

Until lately there have been but two methods of obtaining pure pancreatic juice, that of Bernard and that of Ludwig, both of which are open to objections, and the author was not disposed to admit that fluid collected under these circumstances represented the normal fluid. He had recently obtained the pancreatic juice by means of a permanent fistula in the pancreatic duct of the dog. It is decidedly alkaline, perfectly transparent, and less viscous than that obtained by Bernard. But he has not yet made a complete chemical analysis of it.

THURSDAY, JUNE 7TH, THIRD DAY.

DR. J. SOLIS COHEN, of Philadelphia, read a paper entitled

THE ELEMENTS OF PROGNOSIS AND THERAPEUTICS IN LARYNGEAL TUBERCULOSIS.

Dr. Cohen commenced by stating that while admitting the fact that the prognosis was always bad, it might be maintained that it was much less unfavorable in certain classes of cases than in others, and that the indications of the probable length of life could be predicted in great measure from the laryngoscopic picture.

Intense pain in swallowing supervening upon an acute laryngitis, the result of sudden exposure, was the most prominent subjective local symptom in acute tuberculosis of the larynx. Laryngoscopy revealed the cause of the painful dysphagia in great tumefac-

tion of the epiglottis, soon followed by ulceration of this structure and of the fold of tissue uniting it with the pharynx. The duration of the disease, which always terminated fatally, varied from six weeks to six months as the rule. The most efficient means of relief was afforded by insufflations of morphia, or of morphia and iodoform. Previous to the insufflations, the secretions should be detached by the propulsion upon the parts of some alkaline spray. The formula most used by the writer consisted of five grains of borate of soda dissolved with one drachm of glycerine and seven drachms of tar water.

The chronic form of tuberculosis might be divided into two chief groups, one of which lasted from six to eighteen months, and the other from two to four years or more. Congestion of the larynx early in pulmonary tuberculosis, followed by infiltration of the epiglottis, and its progressive destruction by ulceration, is indicative of the more rapid process. Pallor of the mucous membrane, succeeded by tumefactions at the posterior portions of the larynx, is indicative of the slower process. Infiltrations of the interior of the larynx indicate a still slower process in many instances, and ulcerations limited to the epiglottis indicate a much more rapid one. The interference with deglutition is a marked factor in the downward progress of the disease.

With regard to therapeutic measures, in addition to the constitutional treatment appropriate to pulmonary tuberculosis, much good may be done locally by keeping the parts cleansed with alkaline spray, and painting the intumescent parts with equal parts of compound solution of iodine and glycerine, or weak solutions of iodine and carbolic acid combined. In the stage of ulceration, nothing seems to act so well as insufflation with well-powdered iodoform, the unpleasant odor of which may be tolerably well masked by rubbing with it a little attar of rose, one minim to the drachm, or essence of rose geranium, three or more minims to the drachm.

Careful medical attention in this way, with due regard to intercurrent requirements, renders the condition of the patient much more satisfactory, and even starts one now and then on the actual road to recovery.

DR. H. A. MARTIN, of Massachusetts, then read a paper on

#### VACCINATION AND PROPAGATION OF VACCINE VIRUS,

in which he claimed that the proper sources of vaccine are young heifers which have not dropped a calf. The young animal is perfectly exempt from diseases to which the older animals are subject; tuberculosis, for instance, which, in the bovine species is extremely difficult to check, is a disease of old animals; and recent discoveries make it appear that virus from a tuberculous animal is unsafe. Young animals, then, from four to eight months old, are to be preferred. After vaccination they are ready to yield the virus in from six or eight days. A physician must then determine when the vesicle is in the right state to yield lymph, and when the pressure is to be applied. The epidermis of the heifer is very tough and resistant, and does not yield the virus as readily as the human arm. At each point where a puncture is made a drop of perfectly pellucid lymph appears, and upon the application of pressure, it pours forth in a quantity that is surprising. The first points covered are so bloody that we do not use them, yet a large proportion of the points collected are bloody. The number of quill-points collected from a single animal varies from two thousand to six thousand. There being a limit to the production; there must be a minimum price for which the virus can be produced. If you vaccinate an animal once, it can never be vaccinated again.

DR. J. H. HOLLISTER, of Illinois.—If you vaccinate in two places, will you not obtain twice as much virus as when you vaccinate in one?

DR. MARTIN.—Yes.

DR. HOLLISTER.—Then why can you not increase the number of vaccinations indefinitely, and so obtain a larger amount?

DR. MARTIN.—Because the external area of the calf is limited. There are only limited portions of the calf that are fit for vaccination. I have found that the buttock is altogether the best part of the animal for this purpose. We vaccinate in from sixty to one hundred and twenty places.

DR. A. T. KEYT, of Cincinnati, then read the closing paper on the *Diminution of the Retardation of the Pulse in Aortic Insufficiency*.

#### SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

WEDNESDAY, JUNE 6TH, SECOND DAY.

DR. JOHN MORRIS, of Baltimore, read a paper on

WHAT MEANS CAN BE JUDICIOUSLY EMPLOYED TO SHORTEN THE TERM AND LESSEN THE PAIN OF LABOR?

He said that in no one thing have the wisdom and genius of the age been more thoroughly exhibited than in the advance and elevation of the art of midwifery. Once considered an inferior branch of medicine, it has, through the vigor and enlightenment of those pursuing it, risen to the highest rank in the scale of the sciences. He confined his remarks to the management of natural, uncomplicated labor. He treated cases of lingering labor, which he divided into three stages or conditions: 1. Labor may be lingering when the head is delayed at the brim of the pelvis. 2. Where the os has dilated to some extent, and the head has descended into the vagina. 3. Where it has reached the vulva, and impinges on the perineum.

When labor is tardy in the beginning, the os dilating very slowly, the pains feeble and irregular, and the head high up, means may be carefully employed to hasten its progress; but if the woman is cheerful and hopeful, interference may be delayed, but not for twelve or sixteen hours, as Churchill and other writers have recommended. Exhaustion of the woman's powers in the first stage necessitates instrumental aid in the second.

In cases of slow dilatation, Braun, of Vienna, recommends the introduction of an elastic catheter between the chorion and the walls of the uterus; but Dr. Morris thinks the cautious use of the finger much better. After detachment of the membranes in this way, if the soft part of the finger is pressed gently around the whole margin of the os, stretching it, the bag of waters will commence to project, the os will dilate, and the pains become effectual.

For painful cases, where the membranes rupture prematurely—tardy dilatation, due to rigidity; spasmodic contraction; that condition of the uterus in which the fibres of the cervix contract, and form a rim or band above the os; inertia; rigidity of the perineum, etc.; the means the author suggested were detachment of the membranes, dilatation of the cervix, administration of opium or chloroform, hot-water douches, the colpeurynter, dilatation of the perineum by manipulation, sweeping the anterior lip of the os over the occiput, but, above all, forcible external compression. In case all these means fail, the only resource is the forceps, and their application should not be delayed. Dr. Morris strongly recommends Beattie's straight Dublin forceps when the head presents itself at the outlet. He stated in conclusion that, in making these suggestions, he did not wish to be understood as recommending an imitation of the *labors* of the French, where the accoucheur, with



rolled-up sleeves, presents himself in front of the patient, and, with great flurry and a show of manipulation, leads the bystanders to believe that he himself is doing the parturient work, but a scientific employment of measures which experience has proved to be both rational and useful in furtherance of the greatest physiological process known to man.

Dr. T. A. REAMY, of Ohio, said that if there was anything that was an abomination, and ought to be banished from obstetrical practice on account of its great danger to the mother and child, it was ergot. (Applause.)

Dr. E. C. DUDLEY, of Illinois, then read a paper on

#### THE IMMEDIATE APPLICATION OF SUTURES IN PUERPERAL LACERATION OF THE CERVIX AND PERINEUM.

He said that the examination of several hundred cases of immediate perineorrhaphy showed the deeper perineal structures had not satisfactorily united except in a very few cases.

1st. This is accounted for by the failure of operators to include the deep muscular and connective-tissue structures in the suture; to use a sufficient number of sutures; to use silver sutures, to bring the parts accurately together, to pass the sutures at right angles to the laceration, and to continue therein throughout the vaginal portion of the rupture, as well as throughout the cutaneous portion.

2d. Even when these precautions had been observed and complete union had been secured, subsequent examinations often show that the perineum is too small to fulfil its functions.

3d. To insure a permanent perineum of normal size the operator should denude a strip entirely around the ruptured surfaces about one-quarter of an inch in breadth. In consequence of this the perineum, although somewhat larger than normal immediately after closure, will subsequently contract to its proper size. This denudation also serves the important purpose of insuring union by first intention, because it fortifies the torn surfaces by smoothly denuded surfaces which have a greater tendency to adhere. The objection so often raised against the immediate suture, that it so often fails of union, is obviated, and the immediate operation, thus modified, becomes as certain in its results as the secondary operation. This paper elicited some discussion by Drs. Harvey, of Ohio; Watkins, of Kentucky; Jenks, of Chicago; Morris, of Baltimore; Ulrich, of Pennsylvania; and Parsons, of Detroit.

Dr. Wm. H. TAYLOR, of Ohio, then reported a case of *Gastro-elytrotomy*.

#### THURSDAY, JUNE 7TH, THIRD DAY.

Dr. P. ZENNER, of Ohio, read a paper on the

#### VALUE OF GYNECOLOGICAL TREATMENT IN HYSTERIA AND ALLIED AFFECTIONS.

He said that lesions of the female genitalia are sometimes productive of hysteria or allied affections, and that the removal of the local lesion sometimes alleviated or cured the nervous disease.

Hysteria is a disease of the nervous system involving the great nervous centres. It may be termed a functional disease. That a peculiar condition of the nervous system underlies the development of hysteria is seen in the fact that it usually occurs in individuals predisposed to such affections.

The predisposition alone seems sometimes sufficient for the development of the nervous malady; though some exciting cause calls forth its first manifestations. Most frequently this is of psychic origin, emotional excitement, fright, or the slower action of some strong and absorbing passion. Not uncommonly, the exciting

cause appears to be some peripheral source of irritation, producing the disease in a reflex way.

A close relationship between genital functions and nervous diseases is seen in the frequent development of the latter at important periods of sexual life. The time of puberty and the climacteric period are especially favorable for the outbreak of nervous diseases. The periods of gestation and lactation have, though less frequently, a similar record.

It is undoubtedly a fact that hysteria and uterine disease very frequently occur together. But we must not hastily conclude that one is dependent upon the other; perhaps this is a mere coincidence.

It is no uncommon thing to see uterine lesions disappear without improvement of the nervous symptoms, as also the cure of the nervous disease, while the lesions in the genital organs remain.

Dr. Zenner then cited a case, reported by Rosenthal, of hystero-epilepsy, where the unsexing of the woman had no influence on the hysterical seizures, and also a few cases that were under his own care. He added, there are no other diseases which cause the mind to dwell so persistently on the diseased organ as those of the genital organs, and in such cases the influence of the mind is especially injurious. It is important in the treatment to divert the thoughts from the genitals as much as possible. Also, we cannot too strongly condemn the promiscuous gynecological examination of girls or unmarried women merely because there are nervous symptoms.

In the mean time, it must be remembered that the general treatment, the toning up of the nervous system, is always the most important object. In fact, the duty of the physician demands much more than the mere treatment of existing manifestations. He should attempt to prevent the disease, to eradicate the predisposition upon which it depends. He must warn society that the idle lives of the fashionable ladies, with just such employments or amusements as heat up an already wayward imagination, or foster the morbid feeling in their nature, must produce hysterical affections in them, just as overwork, intense application to business, and, even more, the unfortunately common habits of gambling, lead to immense mental injury to men. The physician should inculcate the practice of proper hygienic regulations in childhood, point out a system of education that will soundly develop body and mind, and lead to habits of self-control and unselfishness.

When the disease already exists, proper moral, hygienic, and constitutional treatment, hydrotherapy, etc., and in obstinate cases the plan of treatment brought forward by Weir Mitchell, will often lead to happy results.

This paper was discussed by Drs. Reamy, of Ohio; Garcelon, of Maine; Catlett, of Missouri; Maughs, of Missouri; Proctor, of Illinois; Reed and Zenner, of Ohio.

The CHAIRMAN announced as a *Committee for the Selection of Subject for Prize Essay*, Drs. L. F. Warner, of Massachusetts; H. D. Didama, of New York; and W. H. Byford, of Illinois.

The *Committee of Award*, was appointed by the Chair as follows: Drs. J. C. Reeve, of Ohio; T. A. Reamy, of Ohio; G. M. B. Maughs, of Missouri.

Dr. G. M. B. MAUGHS, of Missouri, read a paper on *The Midwifery and Gynecology of the Ancients*.

Dr. H. A. MARTIN, of Boston, then read a paper on

#### AN APPLIANCE ADAPTED TO OCCASIONAL GYNECIC AND OBSTETRIC EMERGENCIES.

This is a thin bandage of pure rubber, nine inches wide and from five to six feet long, and has been found of very great value in many cases of abdominal dis-

ease in which no other form of bandage could be endured by the patient.

#### SECTION ON SURGERY AND ANATOMY.

WEDNESDAY, JUNE 6TH, SECOND DAY.

DR. ROBERT NEWMAN, of New York, presented a paper on the *Surgical Use of Electrolysis*, in which he submitted a tabulated statement of one hundred cases of urethral stricture treated by this method.

DR. JAMES R. TAYLOR, of New York, then read a paper on the

#### TREATMENT OF FRACTURES OF THE LONG BONES,

in which he briefly presented some methods of diagnosis and treatment from the extensive surgical *clientèle* of the out-door department of Bellevue Hospital. He first spoke of fracture of the thigh bone, which he treats with a saddle made to fit into the perineum, whereby he secures the most perfect comfort possible by any apparatus used for the purpose of counter-extension. This neatly devised little saddle is held in position by a strap, running to the headboard on each side, thus securing the patient in an immovable position. By fastening strips of adhesive plaster, previously secured to the leg, to a screw arrangement in the foot of the bed, he can produce any desired degree of extension of the limbs by simply turning the little screw at the foot of the bed; the chief advantage of the whole apparatus over all other instruments being the little saddle on which the patient sits, as it were, with comfort, he claims, rather than misery, as in most other methods. He announced himself as positively opposed to the old method of using stones and other suspensory weights to produce extension of the limbs, and then turned his attention to the treatment of fractured ribs. He brings the broken ends into place by raising the arms over the head, an original method by which he claims there is no trouble in adjustment. They are then held in place by a band of adhesive plaster around the body.

DR. H. O. MARCY, of Massachusetts, presented an experimental study of the *Comparative Value of Antiseptics*, in which he summarized the results of his experiments with alcohol, boracic acid, carbolic acid, bichloride of mercury, bichromate of potash, naphthaline, balsam of Peru, common salt, turpentine, glycerine, iodoform, and other germicides. He expressed the hope that Dr. Sternberg would be appointed to make further experiments, and that suitable aid would be furnished him for carrying on an elaborate scientific investigation in this promising field.

DR. LEWIS HALL SAYRE, of New York, next read a paper on

#### AMPUTATION BELOW THE KNEE-JOINT IN PREFERENCE TO "BRISEMENT FORCÉ," OR RESECTION, IN CERTAIN CASES OF DEFORMITY WITH ANCHYLOSIS, ILLUSTRATED BY TWO CASES.

He said that certain diseases of the knee-joint, unless treated with proper extension and counter-extension, result in more or less deformity, consisting of flexion and luxation of the leg backward, in which situation the limb may become fixed or solidified. If anchylosis is fibrous, it can be broken up, and use of the limb and joint frequently follows. If the solidification is bony, and the leg of the same length as the other, a V section should be made through the angle of deformity and the limb straightened and anchylosed in this position. But in cases where disease of the joint has occurred in early life and resulted in bony anchylosis and deformity, the limb below the joint grows more slowly than the other, and as after a V section through the bone, the limb does not grow, by the time the patient reaches adult life it becomes so short as to

be practically useless. In these cases amputation below the knee-joint is preferable when performed by a modification of Prof. Smith's amputation at the knee-joint, Dr. Sayre preferring to saw through the head of the tibia rather than disarticulate at the joint.

Dr. Sayre cited two cases occurring recently in his own practice, in which he had made successful amputations below the knee-joint. One was performed eight weeks ago, and the patient is now walking on an artificial limb; the other, two weeks ago to day, and the limb was dressed for the last time last Sunday.

DR. E. M. MOORE, of New York, read an interesting paper on the

#### TREATMENT OF OLD CASES OF COMPOUND DISLOCATION OF THE ULNA IN CONNECTION WITH COLLES' FRACTURE.

In cases of fracture of the radius, known as Colles' fracture, there is also a dislocation of the styloid extremity of the ulna, which dislocation in many instances is not reduced and great deformity is the result of the fracture. In cases brought to him before the expiration of six months, Dr. Moore does not hesitate to re-break the united fracture, and attempts a reduction of the dislocation; but when the case has gone so long as not to permit of re-fracture, he excises the extremity of the ulna, thus making a movable and useful joint. He narrated the details of several cases in his own practice.

DR. HYDE, of New York, bore strong testimony in favor of the position taken in the paper, and said that the method of Dr. Moore was the only way he knew to cure the deformity.

DR. QUIMBY, of New Jersey, said that, in his practice in cases of Colles' fracture, he had always used the straight splint, and had never had a single bad result, either in young or old.

DR. V. H. COFFMAN, of Nebraska, next read a paper on *Treatment for Tender Spines by Subcutaneous Incision*.

THURSDAY, JUNE 7TH, THIRD DAY.

DR. W. A. BYRD, of Quincy, Illinois, read a paper on *EXCISION OF BOTH HIP-JOINTS FOR MORBUS COXARIS*.

He said that, ever since the first suggestion of the removal of the head of the femur by Charles White, in 1769, for morbus coxarius, there has been great diversity of opinion in regard to the propriety of this operation, a few favoring it, but many condemning it as entirely useless. For while it might save the life of the patient it frequently left a miserably deformed being, incapable of locomotion without the aid of crutches or cane, and the chances of cure were no better than if the patient were left to depend upon the slow process of spontaneous exfoliation of the diseased bone—a process rarely accomplished before the death of the patient. Opinions, however, have greatly changed since the number of excisions have become numerous enough to compare with older methods. Dr. Byrd had been able to find a record of but two cases of double excisions. The patient, aged ten years, upon which he operated now goes without crutches up and down stairs and over smooth ground, though using crutches over rough ground. He read an account of her condition previous to the excision, written by Dr. Moses F. Bassett, April 12, 1881. Dr. Byrd removed the head and upper portion of the right femur, commencing the incision two inches above the great trochanter, and continued it downward, curving it so as to pass behind the great trochanter, ending five inches below its origin. The soft parts were pulled aside and detached carefully with the periosteum, from the bone, with a dental scraper. The head of the bone was thrown



out through the opening, and, on account of the softened condition of the bone, it was divided just below the trochanter with pliers. There being an abscess over the greater trochanter of the left limb, it was freely laid open, and the trochanter removed with the pliers, there appearing to be no other portion of the bone diseased. Both wounds were dressed with balsam of Peru and oakum, and the child placed in one of Dr. W. P. Verity's splints.

Dr. VERITY, of Chicago, here exhibited his splint and derrick, and explained their operation. He placed upon the platform an upright post, to which he attached a triangular frame, made of strips of wood fastened together by strong strap-iron hinges, and attached to the upright by means of a clamp. From the extremity of this triangle hung suspended, by a strong cord, the wire framework in which the patient lies, capable of adjustment to fit any desired position of the limbs. The triangular frame can also be adjusted at an angle, and is capable of being attached to a door post, or any such convenient upright. The entire apparatus is very portable, and can be packed up for transportation in a few seconds; while in this condition it occupies no more space than an ordinary violin box. Dr. Sayre, of New York, and Dr. Gunn, of Chicago, spoke in high terms of the splint.

Dr. HENRY O. MARCY, of Massachusetts, next read a paper on the

#### SURGICAL TREATMENT OF INTESTINAL OBSTRUCTION.

He said that intestinal obstructions may well be subdivided into—

1. Chronic, which is gradual;
2. The late acute, which usually supervenes upon the first; and,
3. The early acute.

Under these divisions are included impaction of feces, fibrous and cancerous strictures, polypi, tumors, abscesses compressing the bowel, intussusception, and injuries; but we shall discuss now only the question of acute obstructions.

The first and most important consideration is not only an accurate, but a prompt diagnosis. Internal obstructions should be relegated to the surgical domain, upon precisely the same grounds as external obstructions. Granted that diagnosis of complete internal obstruction has been determined, the earlier operative interference is decided upon the better. In intussusception the old Hippocratic plan of inflation may be tried, and this is much more likely to succeed under anæsthetics. Dr. Thomas Hawkins, of New York, strongly advocates hydrostatic pressure. Early recourse should be had to gastrotomy, under the most careful antiseptic precautions.

Finding the obstructed portion, be guided by its factorage. If there are long bridles of peritoneal bands, then simple division may be all that is required. If a twist or intussusception, perchance these are easily remedied. What shall be done if necrosis of the intestinal tube has already supervened? One of two devices only is left for selection, *i. e.*, stitching the ends of the canal into the wound, with the hope of some further operative procedure, or resection of the necrosed portion, with very careful adjustment of the divided ends and mesenteric attachment. This must be done in such a manner as to bring the peritoneal surfaces in approximation, and in this way the wounded edges and mucous membrane are all turned into the intestinal cavity. Silk may be used, but properly prepared animal ligatures are to be preferred. Having restored the continuity of the intestinal canal, close the abdominal wound. This is effected precisely as in ovariectomy, with careful antiseptic precautions.

Dr. GARCELON, of Maine, asked Dr. Marcy what

his experience had been in abdominal section for intestinal obstruction, so far as good results were concerned.

Dr. MARCY replied that his experience had not been very large, but some cases had been fatal, others successful in their outcome.

Dr. MOORE, of Rochester, said that in making an operation for removal of any intestinal obstruction, he did not use the carbolic-acid spray, but was in the habit of pouring carbonic-acid gas into the cavity, believing the true theory to be not to cure the atmosphere but to keep the atmosphere out.

The paper evoked considerable discussion on the relative merits of aseptic and antiseptic treatment, which was participated in by Drs. Byrd, Murdoch, Keller, Moore, and Marcy.

Dr. T. F. PREWITT, of St. Louis, next read a paper on

#### A NEW OPERATION FOR THE CURE OF RANULA.

He said: The methods recommended and practised by surgeons at this day consist either in the introduction of a seton, injections into the sac, or partial excision of the ranula. Of these, almost all modern surgeons prefer excision of a portion of the sac, total excision being impracticable. Having met with a case of double ranula recently, in which this partial excision, followed later by persistent catheterization, failed, it occurred to me that I might, by a plastic operation, secure a permanently patulous orifice.

*Case:* Fifteen years old; swelling under left lower maxilla nearly as large as a goose egg; fluctuated freely, some portions seeming hard, and projected into the mouth under the tongue. Diagnosis of ranula was made, and a portion of the cyst-wall in floor of the mouth was excised. A quantity of clear mucoid fluid spurted out as the cyst was incised. In the course of two or three weeks this had contracted and threatened to close, and catheterization was resorted to. In the mean time, a ranula had appeared under the tongue upon the right side, with translucent, bluish, thin walls, but not projecting beneath the jaw. This also was treated by excision of a portion of the cyst-wall.

In July the young man ceased to present himself; the orifices had closed, the sacs rapidly filled, and he was again brought to me in an alarming state from threatened suffocation. Both ranulæ were swollen and painful. Upon the left side, the swelling extended well down toward the clavicle and sternum and across the trachea in front. Upon the right side, the ranula was greatly swollen, meeting with that upon the left side under the chin in a continuous swelling from the angle of the jaw upon one side around to the opposite side. Both inspiration and expiration were obstructed, the patient was flushed and feverish, and it seemed as if tracheotomy might be necessary. I incised the cysts freely, permitting the escape of the accumulated fluids, and directed hot fomentations to be persistently applied. This gave speedy relief to all urgent symptoms, and as contraction took place, I then resorted to catheterization, with the view of preventing reclosure. This was persevered in for two or three months, and was more effectual upon the left side, for the reason that the bougie—a soft conical rubber, about No. 15 French—could be passed down for two inches, and could be felt below the margin of the jaw upon the right side; and when its use was intermitted for a few days, the opening would close completely. I determined, therefore, to make a permanent opening by a plastic operation on that side. I carefully dissected the mucous membrane of the mouth over the cyst, denuding a surface as large as a nickel. I then incised the cyst-wall, turned it over, tacked its free edge to the border of the mucous membrane of the mouth with fine silk sutures;

union by first intention took place; the stitches were removed upon the third day, and an orifice was secured that has remained patulous to this time. This was in November last; the patient became irregular in his attendance, and finally ceased to present himself to have the left side catheterized. On the first of April he came to me with considerable accumulation on the left side, and the orifice closed. I repeated the operation on that side with a like fortunate result, and now the openings are patulous upon the right and left sides, and the patient has no trouble whatever from reaccumulation of the fluid.

DR. JOSEPH RANSOHOFF, of Cincinnati, next read an elaborate paper on

#### THE EARLY USE OF THE TREPHINE,

saying that a careful study of the vascular relation of a bone to its periosteum and medulla, led to the conviction that there could be no serious deviation from the normal in either without implication of the remaining parts. He stated these propositions: 1. That the exposure of the medullary cavity *per se* is unattended by deleterious consequences. 2. That the continuance of increased intra-osseous pressure is the main source of secondary changes. If these propositions are correct, it follows that in the very earliest possible use of the trephine, we possess an inestimable means of saving life in the acutest forms of bone disease, of curtailing by months, and even by years the course of others, and of preventing the deformities and operative mutilations that follow in the wake of even mild cases. Dr. Ransohoff gave interesting details of three cases, in which he had used the trephine with good results.

DR. GUNN, of Chicago, expressed very warm approbation of the paper, stating that it perfectly coincided with his own experience, which dated back more than a quarter of a century. He stated that in bone operations he poured into the wound from a teaspoonful to a tablespoonful of boracic acid, which he considered the best of antiseptic agents, and guarded against the too early closing of the bone by inserting pure white wax moulded into forms of suitable size for the opening, frequently boring a hole through the wax, making it essentially a drainage-tube.

DR. HYDE, of New York, also spoke in confirmation of the grounds taken in the paper.

DR. H. J. REYNOLDS, of Mich., next read a paper on

#### TREATMENT OF STRICTURE OF THE URETHRA.

He said no importance should be attached to the statement of a patient that his stream is of full size. The size may be evidence of presence of stricture, but not of its non-existence. For either large or small calibred stricture he preferred internal cutting and stretching with Otis's instrument to all other methods. He always, however, provided the patient with a full-sized sound, with instructions to pass it every few days for an indefinite length of time. If the stricture be too small for this instrument, he enlarged it sufficiently to admit first, a Thompson's or Maisonneuve's instrument, and then he used the Otis instrument carrying the enlargement even beyond the normal calibre to ensure the absolute and complete removal of all obstructions, without which the cure is liable not to be permanent; the smallest amount of obstruction or contraction remaining, he claimed, will furnish a groundwork for future gleet or contraction, or both.

He then gave a report of several cases treated by different methods, showing the comparative merits of each, among which was a case of extreme stricture involving external perineal urethrotomy without a guide, and in which even the prostatic portion was contracted in its anterior part. In this case, a pocket an

inch deep and large enough to admit the finger, extended upward and backward in front of the prostate, the septum between which and the urethra he cut across.

#### SECTION ON STATE MEDICINE.

TUESDAY, JUNE 5TH, FIRST DAY.

DR. ALBERT L. GIHON, U. S. N., read a paper entitled  
MEDICAL EDUCATION THE FUNDAMENTAL FACT IN  
MEDICAL ETHICS.

He said, superficial observers see in the question which has arisen in the State Medical Society of New York only an attempt to break down the guards which hedge in the kingship of our profession. They have, indeed, proclaimed afar that the time-honored traditions of the guild are to be ignored, and the right hand of fellowship given to the accused unbeliever. A year has passed since this question arose, and the dignified body of which we form a part, evaded meeting the issue face to face. A few voices were raised in explanation, but they were drowned in the cry: "Crucify him, crucify him, he breaks bread with a homœopath!" The august fathers of the Association frowned their displeasure, and the venerable puppets of antiquity were taken down from their dusty niches and displayed to exorcise this new demon of the nineteenth century. Outside the halls animated *ex-parte* statements were circulated, and a thousand delegates went away believing that a few individuals in the city of New York, mainly specialists, for purposes of personal profit were advocating the license to consult and confer with avowed homœopaths—this, and nothing more. Since then the matter has acquired a newspaper notoriety, and it is blazoned to the world as a fact, that the delegates of the State and County Medical Societies of New York have disqualified themselves for association with us, because they have sanctioned the formal recognition of homœopaths in clinical conference, and the popular sympathy of the profession has been aroused against these mercenary innovators. It is, of course, the business of the Judicial Council "to take cognizance of and decide all questions of an ethical or judicial character that may arise in connection with the Association," but every member of the Association has an equal interest with these twenty-one in the inquiry into the causes which have induced some of the most exemplary members of the profession to their course. Is it as alleged, that the Code of Ethics is an antiquated piece of verbosity? Does it really accomplish what it professed? Undoubtedly its purport was the exclusion from professional fellowship of all but those who are entitled to it by their intelligence, education, professional skill and acquirements, and that fearless probity that doth become a man. Has it done this? Does it do it to-day? Are there intelligent, educated, skilful, and upright men in the profession because of the Code, or in spite of it? It is unquestionably true there are no homœopaths in the American Medical Association, but are there any allopaths there? Does it say "brother" only to those who are fit to wear the mantle of the wise physician? These are questions for the Association to ask itself, and primarily it is for the State Medicine Section, in its purview over medical education, to discuss calmly, fearlessly, and thoroughly, and to go with its conclusions and announce them to the Association, however unpopular or unpopular.

I do not propose at this time any formal criticism or arraignment of the Code of Ethics. Practically, three lines only are the shibboleth which the elect are required to utter—"No one can be considered as a regular practitioner, or a fit associate in consultation, whose practice is based on an exclusive dogma." Prior to this it is stated that "a regular medical education is



presumptive evidence of professional abilities and requirements;" but you may read the fifteen pages of the Code in vain for the definition of what constitutes "a regular medical education," and it is to this I now propose especially to limit my inquiry—whether, while straining at the gnat in the twelfth, thirteenth, and fourteenth lines of section one, article four, we have not swallowed a camel in the other eleven.

Mr. Chairman, the time has come when this Association must be up and doing. A few medical schools have undertaken the reform, but the movement that has been inaugurated, notably by Harvard, will avail little, so long as the Association unconcernedly witnesses and indirectly countenances the wholesale manufacture of doctors elsewhere—by accepting their membership without question of their competence. The time has come when something more than paper bulwarks shall be considered defence for our orthodox stronghold, and paper partitions sufficient to separate the sheep from the goats. The time has come for us to act, and it is eminently proper that the Section in State Medicine shall be the scene of action. The discussion in New York has made it impossible for us to remain indifferent spectators. I trust that no member of this Section has been misled into believing that any of the distinguished men who have taken part in this agitation have asked for anything that involves, in the least degree, any concession to the claims of homœopathy, allopathy, or any other exclusive dogma; that none of them have suggested, advocated, or desired any arrangement that can provide for or permit the joint treatment in any case by themselves and homœopaths, or any other paths. They have, however, claimed the right to give their opinion to any one who asks for it, and is willing to pay for it—to tell any sick person what he thinks of his case, and what he considers ought to be done. In this they give no sanction to the "irregular," whoever he may be, who has sought their advice, even though this irregular may be even wiser than that regular who castrates in orchitis and gives his puerperal woman a Russian bath. The very fact of his advice having been sought is an admission on the part of the irregular that he has done wrong or knows not what to do, and if, as alleged, these irregulars have not sought these consultations, then none will be, and the storm is but a tempest in a teapot. It is for you, however, to determine decisively whether you will place under the ban the man whose only offence has been to say to one of these irregulars, "You are doing wrong;" or will exclude from the ranks of the profession that one of your distinguished colleagues in New York, who, when called in consultation in a case of difficult labor, requiring instrumental interference, did not stop to examine the diploma of the attending physician, but went to work, finding him an exceedingly expert assistant, and learned when the patient had been rescued from danger that he had been coöperating with a homœopath; or will threaten the young road surgeon, who, at the close of the meeting at St. Paul, asked me whether he should operate in a case of caries of the tibia in a poor woman at a station where the only physician was a homœopath. "Do it if you dare. You shall never cross our threshold if you do. Let her die first."

[This paper caused very considerable comment among the members of the Association, and when it became known that Dr. Gihon had been nominated as one of the Vice-presidents of the Association by the Committee on Nominations, active steps were at once taken to reject the nomination.

The Committee on Nominations, of which Dr. Gihon was a member, was reconvened and his nomination reconsidered. Dr. Gihon then offered a formal written statement to the Committee that he was in favor of

the Code of Ethics of the American Medical Association; in consideration of which it was resolved that the report of the Committee, as originally adopted, should be presented to the Association, together with the written statement of Dr. Gihon.]

#### WEDNESDAY, JUNE 6TH, SECOND DAY.

DR. H. A. JOHNSON, of Ill., presented a statement of the work done by the

#### ILLINOIS STATE BOARD OF HEALTH.

This paper set forth what the Board has accomplished since its organization, in 1877, for the profession. It is the purpose of this Board to root out all incompetent men practising medicine in that State. At the date of the foundation of the Board, the profession embraced 7,400 individuals, and was composed of 3,600 graduates in medicine, and 3,800 non-graduates, itinerants, and nondescripts, who combined various other vocations with that of doctor. These, almost without exception, belonged to some of the irregular schools. A very small portion of this number now remains, through the efforts of the Board, and the existence of those that remain is due to what is known as the ten years' prior practice clause of the medical practice act.

#### THURSDAY, JUNE 7TH, THIRD DAY.

The following resolutions concerning

#### MEDICAL EDUCATION,

offered by DR. GIHON, in connection with his paper on the first day, were taken up and discussed.

*Resolved*, That the Section in State Medicine urges upon the Association the necessity for at once taking steps to exclude unqualified members from the profession by refusing fellowship to illiterate, ignorant, and incompetent graduates.

*Resolved*, That the Association be recommended to authorize the Section in State Medicine to act as a standing committee on medical education, the several elected members being required to communicate without delay (I) with the several State medical societies, and the Legislatures of the States they respectively represent, with the object of creating State Boards of Medical Examiners, where such are not already in existence, whose certificate shall be necessary to the issue of a license to practise medicine in that State; and (II) with the authorities of every regularly organized medical college in that State, which has not already taken such action, urging upon them, first, the requirement of a proper preliminary education of matriculants, to embrace at least a knowledge of English orthography and grammar, the etymology of the more common Greek and Latin derivations, and the fundamental rules of arithmetic, to be ascertained by a written examination preserved for reference; and second, greater care in ascertaining the fitness of candidates for a degree, by making their final examination in part a written one, to be kept on record, and accessible for inspection by State Boards of Medical Examiners, Board of Censors of medical societies, or other authorized persons requiring information as to the professional qualifications of graduates.

*Resolved*, That, in the opinion of the American Medical Association, medical colleges should confer upon graduates the degree of Bachelor in Medicine, such graduates to be eligible to the degree of Doctor in Medicine at the end of three years, after having given satisfactory evidence of their qualification to the Board of Censors of the State Medical Society.

*Resolved*, That Article II. of the plan of organization of the American Medical Association be amended by this additional proviso:

*Provided*, That every permanent organized State, county, or district medical society entitled to representation in this Association shall be required to appoint a Board of Censors, who shall rigidly scrutinize the literary and professional qualifications of every candidate for membership therein, and hereafter no delegate shall be admitted to a seat in this Association who shall not have received the certificate of such a Board of Censors or of a State or National Board of Medical Examiners.

The first two resolutions were voted down, and Dr. Gihon then withdrew the remainder.

#### MEDICAL SERVICE ON OCEAN STEAMSHIPS.

DR. A. N. BELL, of New York, called attention to the condition of emigrant ships, and introduced a resolution as follows:

"Being impressed with the truthfulness and importance of the Memorial of the Parliamentary Bills Committee of the British Medical Association, under date of March 17, 1883, the American Medical Association urges upon the Congress of the United States the subject of competent medical and sanitary service and proper provision for its maintenance on board all transoceanic passenger vessels, and that a committee of five be appointed to promote this object and to report upon the condition of the subject at the next session." The resolution was adopted.

#### SECTION OF OPHTHALMOLOGY, OTOTOLOGY, AND LARYNGOLOGY.

##### WEDNESDAY, JUNE 6TH, SECOND DAY.

DR. L. TURNBULL, of Philadelphia, read a paper on TINNITUS AURIUM AND THE DEAFNESS WHICH ACCOMPANIES DIFFERENT FORMS OF BRIGHT'S DISEASE,

in which he reported several cases, and presented the following conclusions: The symptoms of disturbances of hearing may be an assistance in the diagnosis of the early and obscure stages of Bright's disease. At times, all other symptoms being absent, only cardiac hypertrophy with auditory symptoms are noticed in interstitial nephritis, and the diagnosis may be confirmed by examination of the urine.

DR. FROTHINGHAM, of Mich., asked whether there were any pathognomonic symptoms. He thought that the eye and ear symptoms might be due to that disease of the arterioles which later attacked the kidneys.

DR. CONNOR, of Detroit, said that these aural symptoms would be a very valuable addition to our knowledge, if they were pathognomonic; but he had seen similar symptoms which had no connection with any systemic disease.

DR. TURNBULL, in concluding the discussion, said that he had not noticed any ataxic symptoms in his cases; the subject was too new for him to state whether the symptoms of serous effusion and injection of the tympanic membrane, which he had noticed in all his cases, were pathognomonic or not.

DR. J. L. THOMPSON, of Indiana, then read a paper entitled

#### QUESTIONS ON THE ETIOLOGY OF SOME FORMS OF LENTICULAR OPACITY;

in which he described a peculiar opacity of the lens, occurring chiefly in the lower periphery, which comes on suddenly, and remains unaltered for years.

DR. NOYES, of New York, said that he had seen similar cases quite frequently, and he divided them into two classes: Those accompanying myopia and being of a molecular form; and those in which the opacity is striated and is caused by choroidal retinitis.

He thought the opacity was due to impaired nutrition of the hexagonal epithelium, and that it required years for its development.

DR. HOWE, of Buffalo, said that each such contribution to our knowledge of cataract only showed how much remained to be discovered in regard to its etiology. He mentioned a case of soft cataract in which the lenses were apparently exactly in the same condition, and yet under a similar operation the behavior of the two was entirely different. Reference was also made to experiments upon rabbits: in these animals there being a decided tendency to repair after injury to the capsule. With them, considerable opacities of the lens will sometimes clear up, so as to leave only a slight cicatrix.

DR. H. CULBERTSON, of Ohio, read a paper on *A Case Illustrating the Segmental Feature of Glaucoma*.

DR. J. O. ROE, of New York, then read a paper on

#### NASAL DISEASE, A FREQUENT CAUSE OF ASTHMA,

in which he stated that irritation and obstruction of the nasal chambers would give rise to asthma; and that the asthma of hay-fever was chiefly due to the nasal irritation.

DR. SEILER, of Philadelphia, said that he fully agreed with the author, and that in one case under his observation an attack of asthma had been produced by touching a tender spot in the nose with the end of a probe, and that all the asthmatic symptoms disappeared after the spot had been cauterized. He was also of the opinion that hay-fever is due to nasal catarrh of a hypertrophic variety, and that the mucous membrane becoming irritated by the pollen germs gives rise to the well-known symptoms. He had cured cases of hay-fever by removing the hypertrophic catarrh.

DR. FROTHINGHAM said that he could not see how inflammation of the nasal cavity could exist for any length of time without a tendency to extend into the mucous membrane of the bronchial tubes, and that then these cases would not be different from ordinary cases of the disease.

DR. ROE, in closing the discussion, said he was very glad that Dr. Seiler had supported him in his opinion, and that it was not necessary to have bronchitis in all cases of asthma, but that the congestion of the mucous membrane of the bronchial tubes might readily be produced, which in the beginning produced the asthma.

##### THURSDAY, JUNE 7TH, THIRD DAY.

DR. J. F. RUMBOLD, of Missouri, read a paper on the *Appearance of the Diseased Mucous Membrane of the Nose and Throat of Adult Patients*.

DR. J. J. CHISOLM, of Maryland, then read a paper entitled

#### IS ABSCISSION A PROPER OPERATION?

He said that the irritation of an artificial eye over a stump is greater than when a shell is carried in an eyeless socket, because in the latter case the surface of contact is reduced to a minimum. If, however, movement of the shell is as good after enucleation as after abscission, the latter operation has no advantage.

DR. FROTHINGHAM said that abscission should be abandoned. The uninjured eye should be the objective point, and no risk of sympathetic inflammation from the shell should be incurred for the sake of cosmetic considerations; further, that the abscission is a more difficult operation than is enucleation, and therefore the risk is greater. The stump is always a source of danger even after a lapse of years.

DR. C. J. LUNDY, of Detroit, had seen cases of total blindness from sympathetic ophthalmia after abscis-



sion. He thinks that the wearing of an artificial eye over these stumps often produces great irritation; that he had seen a case of ossification of the ciliary body and choroid as the result of irritation from the wearing of an artificial eye over such a stump.

DR. THOMPSON, of Indianapolis, coincided most fully with the views expressed by Dr. Chisolm, and mentioned several cases of panophthalmitis following abscission; and two cases occurred under his own observation where two formerly healthy eyes were sacrificed and vision totally lost after the operation of abscission.

DR. CULBERTSON, of Ohio, said that he had never had an unfavorable result in abscission, and he thought his success was due to the fact that he did not put any stitches in the eyeball.

DR. CONNOR said he had seen disastrous results following the operation of abscission.

DR. NOYES said he had formerly performed the operation often, but had never seen bad results follow. In all these cases he had, however, advised enucleation of the eye. He thought that suppuration prevented sympathetic inflammation in the other eye, and in the case of a foreign body, he should always advise enucleation; and he thought that the safety of the uninjured eye was the main point.

DR. CHISOLM, in closing the discussion, said that formerly he had been in favor of abscission, but that now he considered an injured eyeball, whether from operation or from accident, a source of great danger.

#### SECTION ON DISEASES OF CHILDREN.

WEDNESDAY, JUNE 6TH, SECOND DAY.

DR. A. Y. P. GARNETT, of Washington, D. C., read a paper upon

#### EPIDEMIC JAUNDICE AMONG CHILDREN.

In his experience, he said, epidemic jaundice had been confined to children. He related the history of an epidemic which had come under his notice during the months of July and August, 1881. He had under observation six cases, of ages varying from two to six years. The cases occurred at that season of the year when the temperature attained its maximum elevation, and none were in parts of the city supposed to be exposed to malarial influences.

DR. BLAINE, of Pa., spoke of cases which had come under his observation, in which he had attributed the disease to heat.

DR. W. SHEEHAN, of New York, spoke of a case which had come under his observation on a warm, spring-like day in the month of February, the child not being properly protected against the weather. He expressed the opinion that in some cases cold was also an important factor.

DR. WM. LEE, of Baltimore, spoke of nervous influences as an exciting cause, and referred to a case which had come under his observation in midwinter.

DR. ALEXANDER HARRIS, of Virginia, then read a paper on

#### THE UNITY OF DIPHTHERIA AND MEMBRANOUS CROUP.

He claimed the identity of the diseases and thought that it was only necessary to prove the identity of laryngeal with pharyngeal false membrane to establish his point.

DR. SNOW declared his belief in the individuality of the two diseases. He said that one is a contagious disease, the other is not; one usually has its starting-point in the pharynx, the other in the air-passages.

THURSDAY, JUNE 7TH, THIRD DAY.

DR. GOOD, of Indiana, read a paper on

#### DENTITION.

He said that dentition was not classed as a disease, but the diseases which accompany it are numerous. He advocated lancing the gums when swollen, or when there is functional derangement of the stomach and bowels.

DR. EARLE, of Illinois, said that in teething infants he had checked severe diarrhoea, amounting almost to cholera infantum, by simply lancing the gums and without any medication, only paying attention to diet.

DR. GOODWIN ORTH, of Indiana, said that in his experience of thirty-three years, he had been in the habit of lancing the gums, and frequently found that it gave instantaneous relief, and he believed that the teeth came out more readily with scarification than without.

DR. J. B. CASEBEER, of Auburn, Ind., then read a paper on

#### PEDIATRIC MEDICINE AND ITS RELATION TO GENERAL MEDICINE.

He urged that diseases of children speak as plain a language, and require as direct remedies to control them as do those of the adult.

DR. NORMAN TEALE, of Indiana, read a paper on *Infantile Paralysis*, and detailed the history of a typical case.

#### THE EXHIBITION HALL.

The exhibition of pharmaceutical preparations, surgical instruments, and medical publications was held in the Tabernacle, a large but by no means handsome building situated about three blocks from Case Hall, in which the general sessions were held. The attendance of physicians was far from being large, in spite of the very handsome appearance made by several of the exhibitors and the attraction of a practically unlimited number of samples of all kinds.

Messrs. Park, Davis & Co. had a large space, and showed many of the new drugs of which they make a specialty, both in the crude and manufactured state.

McKesson & Robbins, of New York, had one of the handsomest exhibits in the Hall, and displayed among other preparations seventy-six different alkaloidal salts of the cinchona bark.

W. R. Warner & Co., of Philadelphia, had an attractive stand, and devoted especial attention to their new parvules for medication in small, often repeated doses.

C. H. Phillips, of New York, offered sterling attractions, in the estimation of visitors, by dispensing cups of a new preparation of phosphated cocoa.

Among other manufacturing pharmacists represented were Wyeth & Bro., Schieffelin & Co., E. G. Houghton & Co., Metcalf & Co., Mallinckrodt & Co., and Powers & Weightman, the last two firms exhibiting fine chemicals only.

One of the neatest exhibits was made by Lambert & Co., of St. Louis, whose ebony stand and rich Turkish rugs attracted considerable attention.

Among the surgical instrument-makers, John C. Frye, of Portland, Me., and John Reynders & Co., of New York, were the most prominent. Both of these firms had fine exhibits.

The publishers of medical books and journals were somewhat hardly treated, being relegated to an out-of-the-way corner. Messrs. Henry C. Lea's Son & Co., D. Appleton & Co., J. H. Chambers & Co., P. W. Garfield, and D. G. Brinton were all represented.

The general feeling among exhibitors seemed to be that a more centrally located hall might have been procured; but in other respects the Committee having charge of the exhibits acquitted itself admirably.

## AMERICAN SURGICAL ASSOCIATION.

*Fourth Annual Session, held in Cincinnati, May 31,  
and June 1 and 2, 1883.*

(Specially reported for THE MEDICAL NEWS.)

(Concluded from p. 672.)

## AFTERNOON SESSION.

DR. J. M. BARTON, of Philadelphia, presented a

## SPLINT FOR EXTENSION OF THE WRIST-JOINT

which he had used for some years, in synovitis of the wrist-joint. The splint was a light one, yet is capable of making powerful extension, is not conspicuous, and permits some use of the fingers. It was made of wire, is eleven to thirteen inches long, and from one and a half to two inches wide. It is placed on the palmar aspect of the forearm, reaching from a little below the bend of the elbow to below the lower end of the metacarpal bones. The extension is made by a piece of heavy rubber elastic, which is fastened to a cross-wire at the upper end, and passes over a roller at the other end of the splint. The speaker then entered at some length into the consideration of the advantages of his invention, and explained fully its conveniences by making a practical application of it.

DR. DAVID PRINCE, of Jacksonville, Illinois, presented his

## RECTAL OBTURATOR,

which consists of a hollow rubber ring, capable of being expanded by air or water, and provided with a central aperture through which a tube or hollow bougie may be passed for conveying water into the intestine. In using the obturator, it is pushed into the rectum, through the sphincter, then distended, and the bowel filled through the bougie. Its applicability is obvious for all cases in which a large quantity of fluid is to be introduced into the rectum, whether the fluid be water, for the relief of constipation, obstipation, strangulation, or simply to reduce the temperature by thinning the blood; nutritious fluids, or alcohol for stimulation or anaesthesia.

DR. PRUITT stated that he believed that an ordinary syringe would answer every purpose of the obturator, and cautioned against the danger of over-distention and consequent rupture of the bowel. Then again, said he, it is in some cases exceedingly difficult to make a differential diagnosis in cases of obstruction of the bowel; and while the injection of large quantities of water or of air in cases of simple obstruction might do very well, in cases of volvulus it would lead to a rapidly fatal result.

DR. CAMPBELL expressed his unbelief in the value of nutritious enemata. How, he said, can nutritious substances be digested in the rectum? They must enter the small intestine.

DR. PRINCE replied to these objections by stating that, in the first place, it was not intended that great force should be used in injecting the fluid or air, but only that a large quantity might be introduced, the obturator enabling the patient to overcome the involuntary efforts at evacuation which followed the first introduction of fluid. Used in this way, he could not only force water up to the point of obstruction, but could estimate, from the quantity required to reach that point, the location of the difficulty. As for Dr. Campbell's objection, he considered that an argument in favor of his instrument, for the great reason for the failure of nutritive injections, he thought, was that too small a quantity was always employed, and the fluid did not pass far enough into the bowel.

Next in order was a voluntary paper on

## STRICTURES OF THE OESOPHAGUS,

with cases and the treatment, by HENRY F. CAMPBELL, M.D., of Augusta, Ga. The frequency of injuries to the oesophagus, resulting in obstruction and disability of the tube for the transmission of food to the stomach, he said, gives them an importance well worthy of the careful consideration of the surgeon. The object of the present paper was, however, mainly to express the experience of the author in a number of cases which it had fallen to his lot to witness privately or in consultation. The muscular layers of the oesophagus make it very liable to spasmodic contraction upon any irritation of its mucous membrane. The comparison which most authors make of the oesophagus and urethra is most fallacious. The recently recommended division of strictures of this tube is a highly objectionable procedure, and is in every way inferior to the safer although slower process of dilatation; and he had as yet found no case that was not amenable to this treatment. He then entered briefly into a discussion of the causes of the complaint, and narrated four cases which had come under his own treatment. In all of them, the stricture had been remarkably close and firm, but by the frequent and long-continued passage of sounds, he had succeeded in effecting a cure. He considered the ordinary flexible olive-pointed urethral bougie the best form of instrument for the early treatment, gradually increasing the size until a large oesophageal sound can be passed.

DR. PRINCE reported the case of a child two years and a half old, that had swallowed lye, and in which he had gotten relief by the passage of an electrode, using the constant galvanic current. The third attempt succeeded in reaching the stomach. In a week solid food could be eaten.

Owing to the lateness of the hour, DR. C. H. MASTIN, of Mobile, Ala., was compelled to give only a very brief sketch of the points he had intended bringing out in his paper, entitled

## SOME REFLECTION UPON THE OPERATION OF EXTERNAL PERINEAL URETHROTOMY.

He stated a few of the better methods and described briefly the method he employed in certain cases. He closed by cautioning against the use of persulphate of iron in hemorrhage from such operations.

DR. CAMPBELL, of Augusta, Ga., now presented

## A NEW SPLINT

devised by Dr. John S. Coleman, of Augusta. The instrument consisted of two felt splints for the forearm, secured by leather bands with straps and buckles, one below and one above the elbow. A brace connected with these bands prevented all motion. The splint was obviously intended for the treatment of fractures in or about the elbow.

THE PRESIDENT now called an

## EXECUTIVE SESSION,

in which the following business was acted upon:

A motion to increase the membership from one hundred to one hundred and fifty was lost.

## VOLUME OF TRANSACTIONS.

The Recorder was authorized to publish in a handsome and substantial volume, the full report of the Transactions of the Association during the four years of its existence.

The following

## NEW MEMBERS

were elected: H. K. Steele, M.D., of Denver, Col.; Herbert Judd, M.D., of Illinois; Thomas M. Markoe, M.D., of New York.



## THE LIBRARY AND MUSEUM OF THE SURGEON-GENERAL'S OFFICE.

A resolution was adopted petitioning Congress for an appropriation of sufficient money to complete the publication of the indexed catalogue of medical books in the National Medical Library, and to provide for the Museum and Library, a fire-proof building.

## THE CODE OF ETHICS.

The following resolution was offered by the Council, to whom the subject had been previously referred, and was adopted by the Association:

*Resolved*, That the Secretary be instructed to address a communication to each Fellow, active or honorary, who is alleged to have violated the Code of Ethics adopted by the American Surgical Association, and request him to withdraw if the allegations be true.

## THANKS TO THE RETIRING PRESIDENT.

The Secretary then read the following resolution offered by DR. W. W. DAWSON:

*Resolved*, That a vote of thanks be returned to our retiring President, Samuel D. Gross, and that the members of the Association unite in the hope that he may be long spared to meet with us, to cheer us by his presence, and to guide us by his wise counsel.

## AN ANNUAL BANQUET.

It was also resolved that hereafter a banquet should be given at the expense of the Association, the local committees of arrangements to make all necessary provisions for the same.

PRESIDENT GROSS then made the following

## VALEDICTORY.

Let me congratulate you, gentlemen, upon the success of this, the Fourth Annual Meeting of the American Surgical Association. I have been your presiding officer from the inception down to the present moment. I feel honored, and highly appreciate what you have done for me. In all your deliberations I have endeavored to act with an eye single to the interests of the Association, and with that impartiality which has always characterized my actions in all my relations to the Association.

Now that I am about to retire from the discharge of these duties, I am assured that the interests of the Association will be perfectly safe in your hands and the hands of my successors. I have no greater ambition, gentlemen, than to live in your affection and your esteem, and to witness the ever-increasing success of the Association. Its success is closely associated with the remainder of my life, for I believe that we have established an Association that will yet exert a great power for good in the land; and when I die, as I must, I hope you will bear in mind that I trust to your keeping the good of the American Surgical Association.

God bless you, gentlemen; and may you wend your way home to receive that welcome which I know will be extended to you. May God bless you in all your relations in life, and I hope that you will always be faithful to the interests of your profession, and faithful to the Code in connection with which we have carried on our transactions.

The Association then adjourned, to meet in Washington, D. C., on the Wednesday preceding the annual meeting of the American Medical Association in 1884.

## MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

*Stated Meeting, April 27th.*

(Specially reported for THE MEDICAL NEWS.)

(Concluded from page 638.)

THE PRESIDENT, R. A. KENNEDY, M.D., IN THE CHAIR.

## THROMBOSIS AND EMBOLISM OF THE SUPERIOR MESENTERIC ARTERY.

DR. OSLER showed the specimen from the preceding case, and referred to other instances which he had met with. In Dr. Wood's case, the fatal result was directly due to infarction of the bowels, caused by a thrombus in the superior mesenteric artery, the orifice of which was narrowed by a large button of atheroma. This had ulcerated on the surface, and a thrombus had formed which completely blocked the vessel for an inch and a half. This was the third case he had met with of plugging of this vessel, and as the condition was rare and the effects peculiar, he would refer to them.

In February, 1877, a woman aged about 75, was admitted to hospital under Dr. Ross with necrosis of the femur. She was seized with severe abdominal pain, vomiting frequent, diarrhoea at first, and then symptoms which pointed rather to obstruction, persistent vomiting, and great distention of the belly.

At the autopsy the small intestines were found greatly distended and of a deep livid-red color; no inflammation of the peritoneum but about one and one-half pint of bloody serum in the sac. The coats of the bowel were swollen and infiltrated with blood and serum. For about a foot from the pylorus the appearance of the gut was normal, and the last six or seven inches of the ileum were also healthy. The mucosa was deeply congested, soft, and readily scraped off. The mesentery was congested and infiltrated. In the heart, the mitral valve presented numerous recent warty vegetations, soft, pedunculated, and easily torn. The aorta was moderately atheromatous. Dissection of the coeliac axis showed the splenic artery blocked by firm brownish thrombi, which extended from about an inch from the hilus into the branches of the second and third degree. The organ was small and had a turbid, reddish-brown appearance. The hepatic artery was occluded by a firm thrombus, which began near the bifurcation and extended into both branches. The superior mesenteric artery contained a firm brownish-yellow clot, which began about a quarter of an inch from the aorta and extended an inch and a half into the two main branches. Before this chief division six smaller vessels were given off, all of which were plugged. In tracing down the large branches, two of them contained firm thrombi about an inch from the bowel.

A second case was the following:

J. C., aged 40, an engineer, large, muscular man, patient of Dr. Gardner. Good health up to a year before death, when he began to suffer with pains in the back. While wheeling a barrow full of cinders, was suddenly seized with intense pain in abdomen and groins; became faint; fell to the ground, and vomited. He lived for a week after. The chief symptoms were persistent vomiting, which resisted all the usual remedies; severe diarrhoea; great pain in abdomen, which was distended. The voice was husky; eyes sunken; features pinched, and the whole appearance choleraic. The stools were thin, and at times blood-tinged. The temperature did not exceed 101°; pulse was small and infrequent, rarely over 90. The autopsy revealed an abdominal aneurism, involv-

ing the aorta just at the diaphragm. The axis, superior mesenteric, and renals were given off from the sac. There was a beautiful dissecting aneurism of the lower part of the abdominal aorta and the iliac. The blood had passed from the sac beneath the intima at the hinder part of the aorta, and on the right side, and had passed into the iliac, elevating the intima, and narrowing their calibre. On the right side of the external iliac, it had burst externally by a tiny orifice, and a thin sheeting of blood extended beneath the pelvic peritoneum and in the lumbar region. The small intestines were swollen, of a deep purple-red color; the walls infiltrated with blood and serum. They contained a thin, blood-stained fluid. The superior mesenteric artery arose from the most prominent part of the sac, and the orifice was dilated. About half an inch within the vessels was a firm plug of the fibrous lining of the sac which had been dislodged and carried into the artery. There was a pretty firm coagulum about it, and, on the distal side, a dark clot. The mesenteric veins were full, and the membrane thickened and infiltrated.

Functionally, the mesenteric arteries are *terminal* ones, and, when plugged or tied, hemorrhagic infarction of the bowel takes place, as the collateral circulation cannot be established. Anatomically, the collateral channels do exist, but Litten has shown that the blood-pressure is never high enough in them to fill the long series of branches when the superior mesenteric is occluded. In horses, the occurrence of embolism of the mesenteric vessels is common, as portions of the thrombi from verminous aneurisms get dislodged, and plug the smaller branches. It is the chief cause of colic in these animals.

#### SARCOMA OF KIDNEY.

DR. ALLOWAY related the case and presented the specimen. A girl, aged 5, was brought to him on December 8th, by her parents, who had noticed a swelling in the abdomen. He found a pear shaped tumor on the right side in the situation of the kidney, extending to within an inch of the crest of the ilium. She did not complain of pain, and seemed pretty well. On January 22d, was again examined, and the tumor found to have increased in size; a distinct bruit was heard, loudest over the maximum elevation of the growth, and fading towards epigastrium and the spine. The heart was displaced upward, and to the left; sounds normal. The child wasted rapidly, and the tumor continued to grow, until it appeared to fill the abdomen. No pain, no œdema of legs; superficial veins not enlarged; appetite and digestion good, death from exhaustion. The autopsy revealed a large mass occupying the greater part of the abdomen, particularly the right side, to which it was attached. The cæcum and ascending colon were embedded on the left side, and at the upper end, the duodenum was stretched along the margin. It was readily peeled out, and brought with it aorta and cava, which were deeply embedded posteriorly. On the anterior surface, were several large loose hemorrhagic folds, which overlapped the cæcum. The mass was the enormously enlarged, sarcomatous kidney, very soft, vascular, and at the convex border presented a small thin shell of renal substance. The inferior cava and right iliac were compressed, and the latter contained a thrombus. The right iliac artery was also full of grayish sarcomatous masses; microscopically, the mass was composed of small round cells, with but little supporting tissue beyond that which accompanied the bloodvessels. A specimen was shown under the microscope.

#### SCIRRHUS OF PANCREAS; SECONDARY COLLOID OF LUNGS.

DR. OSLER presented the specimens which had been taken from a woman, aged 52, who died under his care

in the General Hospital. She had not had any symptoms pointing to abdominal trouble, but there were shortness of breath, cough, and latterly great lividity. Percussion note was deficient in resonance all over the chest, and dull at right base; numerous whistling and mucous râles. At the autopsy, there was found a small firm cancer of the body of the pancreas, not involving the head or compressing the duct. Both lungs were stuffed with masses of colloid cancer, and presented a remarkable appearance from the number of the translucent, jelly-like tumors. Many of them were isolated, others formed large irregular areas, as the right base. The alveoli of the cancer, distended with the colloid substance, could be plainly seen.

#### URÆMIC COMA, VERY SLIGHT RENAL CHANGES.

DR. OSLER referred to the case, and showed the specimens, which illustrated the necessity of microscopical examination of the kidneys before pronouncing on their healthy or diseased condition. A man, aged about thirty-six, was found by the police in an unconscious state, and brought to the hospital at noon on the 25th. When seen at 4.30 P. M., he was profoundly comatose, livid, and cold; pupils of moderate size; no sign of injury. The urine was drawn off, found to be highly albuminous, and contained casts—hyaline and epithelial. There was no œdema of ankles. Death about 10 P. M. The brain presented some œdema of the membranes, but the substance was not specially moist; no coarse lesions. The kidneys were undersized, right weighed ninety grammes, left one hundred and twenty. Capsules detached easily; surfaces smooth, not in the least degree granular. On section, not very firm; cortices not reduced; no special congestion; arteries not thickened. Close examination showed pale areas in the cortices, particularly near the pyramids. The organs would certainly have passed a superficial inspection. Microscopically, the tubular changes were found to be considerable; epithelium swollen, granular, and fatty, and many of the collecting-tubes contained casts. The majority of the tufts in the sections appeared normal, but here and there a shrivelled, atrophic one was met with, and about some of them there was an increase of connective tissue.

DR. SHEPHERD exhibited the following specimens:

#### (1) ABNORMALITIES OF THE AORTIC ARCH.

(a) An example of a large middle thyroid artery, which arose from the innominate. It passed up the middle of the neck, lying on the trachea and divided, half an inch below the cricoid cartilage, into two branches which went to the right and left side of the trachea.

(b) Two examples of the left carotid arising from the innominate artery instead of from the arch. This was mentioned as being the commonest variety of abnormal arch, and as being the normal arrangement in many animals, as the dog, rabbit, cat, etc.

(c) A left vertebral arising from the arch between the left carotid and left subclavian arteries. It was of large size. The right vertebral was very small, not being larger than a crow-quill. The branches from the right subclavian in this case came off separately, no thyroid axis being present.

#### (2) DOUBLE SUPERIOR VENA CAVA, OR PERSISTENCE OF THE LEFT DUCT OF CUVIER.

This specimen was obtained from a female subject, aged about 65. The persistent vein was the size of a good-sized pen-handle, and the transverse or left innominate vein was not much reduced in size, as is the case when the persistent duct is larger. This was the second example of this anomaly that Dr. Shepherd had



met with, and he stated that the left duct of Cuvier persists normally in birds and some mammals.

(3) A PREPARATION OF AN ABNORMAL RIGHT OBTURATOR ARTERY GIVEN OFF FROM THE EPIGASTRIC.

The obturator passed to the inner side of the femoral ring.

(4) DISSECTION OF A CASE OF TALIPES VARUS (LEFT).

Dr. Shepherd obtained this specimen from a subject in the dissecting-room, aged about 45. The foot had never been operated on, and was a pure case of talipes varus. The deformity was due, principally to the contraction of the tibialis anticus, extensor proprius hallucis, and extensor communis digitorum muscles. Operation by division of the tendons would have relieved the deformity.

PUERPERAL CONVULSIONS.

DR. ARMSTRONG read a paper on three cases which had been under his care.

*Case I.*—Mrs. P., aged 30, second pregnancy, delivered February 4, 1881. A fortnight before delivery she complained of headache, dimness of vision, and pain in the abdomen. The feet, hands, and eyelids were swollen, and the urine was highly albuminous. She lived out of town, and was not seen again until the morning of her confinement. Found os dilating and parts normal; the oedema had almost disappeared. Fearing convulsions during an absence of a few hours, she was ordered ℥j of chloral every hour. On returning, found that she had had a severe convulsion. Os was now fully dilated, but while making the examination a convulsion came on; chloroform was at once administered, the membranes ruptured, and the child delivered with the forceps. Considerable hemorrhage followed. The child was still-born.

*Case II.*—Miss M., aged 29; when first seen, February 10th, had been in labor twelve hours. Os dilated, membranes ruptured, and head well down on perineum. Pains were strong, and recurred every two or three minutes. She complained of inability to move the right arm, and there appeared to be some degree of feebleness in it. No oedema effect. In a couple of hours the child was born. Just after the removal of the placenta, she was seized with a severe convulsion; chloroform was given and liq. opii sed. ℥xxx injected hypodermically. After the convulsion had passed away the patient remained unconscious, and remained so through the day; no paralysis; pupils equal. In the evening she had three mild convulsions; one-fourth of a grain of pilocarpine was injected, the loins dry-cupped, and ℥j of chloral given per rectum. Urine drawn off and found highly albuminous. Pulse 70, temperature normal. February 11th, no return of consciousness; will not swallow liquids. Pulse 110, temperature 101°. In the evening, coma had deepened. 12th. Pulse 132, temperature 102.5°; fourteen convulsions through the night; gave one-fourth of a grain of digitaline (Parke, Davis & Co.) and the pulse fell to 116. Leeches the temples; coma deep; pupils contracted. At 2 P.M., one-half grain of pilocarpine, and the digitaline repeated. Slight facial paralysis on right side. She grew rapidly worse, temperature rose to 104°, had two more convulsions at 8 P.M., and died shortly after midnight. At the autopsy, the vessels of pia mater distended; frontal lobes covered with extravasated blood, which extended on and appeared to come from the parietal lobe of the left side. On section of the organ (Pitres' method) prefrontal and pediculate sections normal. The frontal contained on the left side, the anterior wall of a cavity which held a large clot, which reached the cortex. The parietal section cut the centre of the clot, which measured four

by four centimetres; no blood in ventricles. The kidneys were enlarged and pale, capsules adherent, epithelium in state of granular swelling, veins much engorged. In this case it is possible that the hemorrhage may have taken place or have begun before the convulsions set in, as she complained of numbness in the right shoulder, and loss of power in the right arm.

*Case III.*—Mrs. S., aged 35, second pregnancy. Sent for on Sept. 15, 1882. Patient had had a convulsion two hours before my arrival, and during the visit, a second. No sign of labor; foetal heart-sounds distinct. She complained of headache, and was vomiting. Urine highly albuminous. Ordered chloral, ℥j, per rectum, to be repeated whenever patient complained of any special head symptoms or twitchings. Three weeks elapsed without any further trouble, during which time she had sometimes two or three doses of chloral in the day, and again, two or three days would pass without any. Diuretics were given continuously, and occasionally a purge. The urine remained very albuminous. Patient was delivered of a healthy, living child, and made a good recovery. This case bears on the question of the induction of labor on the appearance of convulsions. The patient went twenty-two days after two severe attacks, and then did well.

DR. WILKINS exhibited sections of the kidney of the second case, which showed granular degeneration and swelling of the renal epithelium, and unusual distention of the small veins. In sections of the medulla, the veins were also greatly distended, and in one portion there appeared to be minute capillary extravasation. With regard to the induction of labor, in a case which he had last August, when the convulsions began labor had set in, and the foetal heart-sounds were strong. The attacks followed every hour, and the heart-sounds of the child become weaker. He then delivered with forceps. The child had convulsive paroxysms for twenty-four hours. In this instance, he believed that if the delivery had been longer delayed, the child would have been dead.

DR. ALLOWAY referred to the various views current regarding the etiology of eclampsia, and to the possible effect upon the child of the uræmic condition. In the treatment, he had been using lately large doses of morphia—two or three grains hypodermically—as recommended by Clarke, of Oswego.

DR. RODGER had had very many cases, and had tried all the forms of treatment. In the last two, he had used morphia in large doses, but as venesection was also employed, he was in doubt as to which to attribute the good results. Chloral and chloroform had proved useless in his hands. In the uræmic convulsions of ordinary Bright's disease, he used pilocarpine, but had not been impressed with its benefits in the puerperal condition.

DR. TRENHOLME remarked that the mental state of the patient was a factor in the causation; thus, the anxiety and grief of unmarried women at this period was, he felt sure, a predisposing cause. When the contraction of the uterus appears to usher in the convulsion, his practice is to hasten labor. The treatment varies with the case. When the patient was plethoric, he bled freely; but he had usually found chloroform, supplemented by chloral and bromides, controlled the convulsions. The death of the child he attributed to separation of the placenta from the uterus, thus cutting off the circulation, and inducing suffocation.

DR. RODDICK stated that, some years ago, when engaged in midwifery practice, he had found chloral of the greatest value in a number of cases. What he wished to call the attention of the Society to, was that, some years ago (1876), their colleague, Dr. Fuller, who had since removed to Grand Rapids, Mich., had read

a paper on convulsions, in which he advocated the treatment by morphia, in full doses. He remembered well that, at the meeting, Dr. Fuller was almost alone in his views; he would now find many supporters.

DR. PROUDFOOT suggested that large doses of chloral might in some cases account for the death of the child.

DR. CAMERON thought that the convulsions were not always due to kidney complications and uræmia. He had recently had a case of an epileptic woman, who had a severe convulsion shortly after delivery. He had treated two cases satisfactorily with morphia. The want of success with chloral he attributed largely to the fact that it was not absorbed.

DR. WOOD relied chiefly on venesection. In one case, recently, in which convulsion came on after delivery, he had bled to fourteen ounces, with good effect; but the patient now had persistent anæmia.

DR. OSLER remarked, on the occurrence of cerebral hemorrhage in puerperal convulsions, two cases which had been met with in the University Lying-in Hospital during the past few years, and he had shown, at the last meeting, a specimen of ventricular hemorrhage from one of them.

DR. KENNEDY believed that in all cases in which uterine contractions were present, and were possibly the exciting cause of the convulsions, labor should be hastened. He used chloroform, and gave chloral and bromides. Venesection was of most value before delivery. He was in the habit, in cases of convulsions, of not exercising any pressure on the uterus, but rather favored slight flow of blood.

DR. CAMPBELL was glad to hear the general expression of opinion in favor of venesection, a practice in which he had the fullest confidence.

DR. ARMSTRONG then briefly replied.

#### MASSACHUSETTS MEDICAL SOCIETY.

*One Hundred and Second Annual Meeting, held at Boston, June 12 and 13, 1883.*

(By Telegraph.)

(Specially reported for THE MEDICAL NEWS.)

TUESDAY, JUNE 12TH, FIRST DAY.

#### MORNING SESSION.

The Annual Meeting of the Massachusetts Medical Society was called to order in Huntington Hall, at the Institute of Technology, Boston, at noon, by the VICE-PRESIDENT, DR. JOHN H. MACKIE, of New Bedford, who announced that the first paper to be read was,

#### A CONTRIBUTION TO THE STUDY OF THE TUBERCLE BACILLUS,

by H. C. Ernst, M.D., of Jamaica Plain. The author first referred to the announcement last year of Koch's discovery of the bacillus tuberculosis, which he claimed to be the cause of tubercle. The question of the inoculability of tubercle has attracted increased attention since the promulgation of the views of Koch. His assertions on the subject have been carefully fortified by numerous cultivations and inoculations, and but very few of the many observers who have examined tubercular tissue for the bacillus have ventured to deny its existence. The author then gave a general review of the subject.

Fräntzel, he said, has observed three hundred and eighty cases of phthisis, and has examined eighty other cases of lung diseases, and always with negative results. In every case of phthisis he has found bacilli; in five cases of phthisis no tubercle bacilli were found; in other cases, where bacilli were found, none of them were cases of cheesy infectious phthisis. He

concludes that the presence of bacilli determines the presence of tuberculosis.

At a meeting of the Vienna Society, Spina read a paper on the subject of Koch's bacillus. He bases his rejection of Koch's theory upon the fact that the bacilli were found to act differently toward fluids from what was supposed. He gives the results of observations as follows: Micrococci of many kinds were stained blue on a brown ground. *A.* In bronchitis sputum. *B.* In sputum of bronchial asthma. *C.* In sputum of diffuse bronchitis. *D.* In the furred tongue of non-phthisical patients. *E.* In the lochia of non-phthisical lying-in-women. *F.* In the sputum of cases of pneumonia. *G.* In the stools of typhus-fever patient. *H.* In the expressed fluid of a case dead of malignant œdema, etc. Stricker addressed the Society in support of Spina and his methods, and Klebs gave the following summary:

1st. That the tuberculosis process is caused by organisms. 2d. That the micrococci are present in the albumen cultures as well as in youngest form of inoculated tubercle. 3d. That the development of the tubercular process begins soon after inoculation. Completely formed tubercles appear only after a longer period, but before their appearance there is extensive cellular deposit; the same primary method of distribution is found in human tuberculosis, in which all the traces of these retrogressive formations in the mesentery and omentum are found in cases of pulmonary tuberculosis. In other cases cheesy foci form in the organs. All the work upon this subject has been for the purpose of identifying the bacillus and determining the frequency of occurrence in tuberculous lesions. The lungs, liver, spleen, kidney, peritoneum, bronchial, mesenteric, and inguinal glands, pia mater, and conjunctiva of the eye have been examined and bacilli have been found. They are less numerous in old or slow processes. The result of my observations is that their presence is diagnostic of tubercle. Bacilli have been found in the bloodvessels and in the lymph-channels. I have never seen anything but a bacillus staining red on a blue ground. The method of staining which I have employed is Ehrlich's.

Record of the examinations of different organs for the detection of bacilli.—A guinea-pig inoculated in the groin with a few drops of tuberculous sputum in December, 1882, died in the middle of January, 1883. Bacilli found in liver, spleen, and peritoneum. 2. A guinea-pig inoculated in the same manner as the preceding, died January 13, 1883. No change in any organ but the liver. 3. A guinea-pig inoculated as the preceding in December 28, 1882, died in March, 1883. The lungs presented no abnormal appearance; bacilli in spleen. 4. A guinea-pig inoculated on March 13th with tuberculous sputum in inguinal region, died in ten days. No bacilli except in spleen; cellular tissue at point of inoculation stuffed with bacilli. 5. A Guinea-pig inoculated in the same manner as first three in December, 1882, died, after emaciation, on April 2, 1883. All organs showed tubercular infiltration, and bacilli were found in lungs, liver, spleen, kidneys, inguinal glands, and skin under the point of inoculation. 6. A guinea-pig inoculated in the eye. The lungs, liver, and glands showed signs of disease, and bacilli were found in giant cells and alveolar walls of portion of lungs, and in the liver. 7. A child of three and a half years, dead of acute military tuberculosis. Lungs, liver, and mesenteric gland showed bacilli very distinctly; none in the liver and peritoneum. 8. A cheesy bronchial gland, removed three months before examination and preserved in absolute alcohol. Bacilli were found in plenty in cheesy portions near the edges, and in comparatively healthy tissues beyond. 9. A case of acute military tuberculosis in a child;



bacilli in kidney in small numbers in region of straight tubules; also in omentum. 10. A specimen named "gland from autopsy." No evidence of bacilli; the specimen was very old, however. 11. Tuberculosis of lungs; a specimen of very old fibroid phthisis which was almost cicatrized, and no bacilli were made out. 12. Tuberculosis of peritoneum; bacilli were seen in small numbers in tissues in neighborhood of the tuberculous process. 13. This was a specimen sent in as a cheesy mesenteric gland from a case in which death was caused by a perforation of the intestines and subsequent peritonitis; bacilli were not found. 14. Contents of a cheesy cavity from the lung of a rapidly fatal case of tuberculosis, bacilli were found in increased numbers, in some cases cells being stuffed with them. 15. Scrapings from the walls of a lung cavity in an ordinary case of phthisis. Bacilli in immense numbers in some places the whole field filled with them. 16. Contents of a lung cavity in a case of slow tuberculosis. Bacilli in immense numbers. 17. Cheesy cervical gland. Bacilli on the edges in clumps and singly in the giant cells. 18. Case of tubercular meningitis dead after a month's illness, enlarged bronchial gland found and the pia mater full of minute granulations. Bacilli near the edges of the tubercular portion of the glands; pia mater showed fixed bacilli. 19. Tuberculous lung. Bacilli found in the edges of cheesy mass of tubercle, and in the centre, bacilli in apparently healthy tissue. 20. Tuberculosis of lung; this like the preceding was a mass of tubercle with cheesy fascia and cicatricial tissue. Bacilli in very large numbers, near the edges in recent degeneration and less in old fibrous portions. 21. Tuberculosis of a small cavity in cortex of the kidney. 22. Tuberculosis of eye, specimen removed last, and preserved in chromic acid; after standing forty-eight hours. A few bacilli were found in the nodule. 23. Miliary tubercle in a child. Bacilli in large numbers in cells in the tuberculous portions of the spleen.

In the mesenteric glands and in tuberculous ulceration of the intestines, it will be seen that in every case of inoculation tuberculosis was developed, and the microscope revealed bacilli in some portions of the organs of animals used in experiments. The series of sputum preparations is to be commended for its accuracy.

In a series of examinations of phthisical patients, the results were as follows:

1. Thirteen examinations of sputum, with positive results in eleven cases; bacilli varying from none at all to very numerous. 2. Sick for one year; hæmoptysis the first symptom; fourteen examinations with positive results in thirteen; bacilli found in large numbers. 3. Cough for six months; discharged relieved; eleven examinations with positive results in six; bacilli found in five successive examinations. 4. Cough for eight months; from February 17th to April 20th, ten examinations with positive results in nine; bacilli varied greatly in number. 5. Sick for seven years; February 10th to June 3d, fifteen examinations, positive results in nine; bacilli in very small numbers. 6. Sick for three years; hæmoptysis the first sign; from February 17th to June 6th, fifteen examinations with positive results in twelve; bacilli very few until examination, when number had increased greatly, but with no increase in the temperature. 7. Sick one year; hæmoptysis the first symptom; from April 20th to June 3d, four examinations, bacilli in every case. 8. Cough for one year; from May 10th to June 3d, three examinations; bacilli in increasing numbers. 9. Cough for two years; May 19th to June 3d, three examinations; many bacilli in every case. 10. Cough and hæmoptysis for ten years; February 17th to June 3d, fifteen examinations; positive results in six only; bacilli seen in very small numbers. 11. Case of

pleurisy; March 14th to May 10th, seven examinations were made, with negative results in every case.

A comparison of the charts show that there is only a very general correspondence between the numbers of the bacilli and the variation of the fever-line.

Continued examinations of the sputum are necessary before the absence of the bacilli can be definitely secured. In rapid cases with free expectoration, there were enormous numbers of the bacilli to be found.

The results of this investigation may be summed up as follows:

A staff-shaped micro-organism exists in all forms of the tubercular process.

Second, it is more abundant in the rapid than in the slow forms of the process.

Third, its specific nature as the cause of the tuberculosis is claimed by Koch on the ground of his observations.

Fourth, the specific character has not been successfully refuted by trustworthy observations.

Fifth, its value as diagnostic evidence is very great, although its absence cannot be considered as excluding that process.

The only observer who has thus far attempted the repetition of Koch's culture experiments is Prof. Feltz, of Nancy, who has announced the failure of his mode. More than one failure must occur to refute the testimony of complete and repeated successes.

At the close of the reading of the paper, Dr. R. H. FITZ, of Boston, said that he thought the evidence of Koch demonstrated the existence of bacilli in the tuberculous tissue of the lungs. He thinks the matter in the fluids is the result of putrefaction.

Dr. BOWDITCH then stated that he would like to ask Dr. Ernst a few questions. Where did these bacilli come from, since they were found in many forms of disease? Was it proper to wear respirators? Were they in the air? If there is danger from inhalation, should this appliance be used, or should they use some disinfectant, such as carbolic acid?

Dr. ERNST then replied that carbolic acid had very little effect upon the bacilli, and was hardly desirable to be used, as it would probably kill the patient, if applied in the quantity and strength necessary to affect the bacilli. The treatment of the tubercle bacillus is one that ought to be discussed and experimented upon, and the experiments be made purely from cultivations. Many of the methods of the former experiments must be radically changed.

G. L. WOODS, M.D., of Springfield, Mass., then read a paper on

#### THE USE AND ABUSE OF ERGOT.

He said when our countryman, Dr. Stearns, first called attention in 1807 to the scientific use of ergot as a uterine motor-stimulant, its physiological action was imperfectly understood, and even now eminent authorities can scarcely agree upon more than the one incontrovertible fact that ergot increases the force and frequency of the contractions of the uterus, with a tendency to make them tetanic in character. That it has a similar contractile effect upon all unstriated muscular fibre, which is so generally distributed in the hollow muscular organs, seems equally clear. Wernich attributes the ebolic properties of ergot to irritation of the uterine nervous centres, caused by secondary arterial anæmia of the spinal cord, due to loss of tone in and dilatation of the veins. Kohler refers the contractions to increased irritability of the puerperal nerves in conjunction with spinal anæmia. A committee on therapeutics in the Chicago Society of Physicians and Surgeons recently reported that ergot excites activity of the cardiac inhibitory centres and also the vaso-motor nervous centres in the medulla, thereby slowing the

heart's action, causing contraction of the arterioles, increase of blood-pressure, diminution of blood-supply, and predisposing to death of the extremities. Very large doses then would seem to have a paralyzing effect upon the heart.

A knowledge of the physiological action of drugs is generally essential to their judicious administration. The most prominent action and use of a drug should not engage our attention to the exclusion of other occasional but deplorable effects. Because our text-books have always taught that, with certain precautions, ergot is innocuous in tardy labor, we are not obliged to accept the statement as a fact, if it can be shown at present or in future, that its use has not been sufficiently restricted. That such has been, and even now is the case, is the firm conviction of the writer. The use of ergot in the first stage of labor is not to be mentioned in this presence.

In view of the instruction which the average graduate has received, and the fact that he enters upon the practice of obstetrics without having seen a case of labor, but with an indefinite idea that ergot is a harmless time- and labor-saving drug, its employment in the second stage of labor becomes a radically different matter. Abundant authority for this use, however, is attested. The indications usually given, which present such a remarkably stereotyped appearance in every succeeding work on obstetrics as to preclude in the mind of the student the possibility of any other views being entertained, may be tersely stated as follows: In lingering labor from uterine inertia, it is regarded as essential that the presentation be vertex, the cervix well dilated, the perineum and ostium vaginae relaxed, and that there be no foetal or pelvic deformity or other obstruction to the speedy delivery of the child.

The contra-indications, as given, naturally suggest themselves; but it is the main object of this paper to express the belief of the writer, who never gives ergot at this stage of labor, but uses the forceps instead, that our authorities have been too liberal in their indications; that the contra-indications and dangers have not been fully appreciated or enumerated with sufficient fulness and clearness; that the routine administration of ergot, into which some of us fall, has been productive of great harm, and to urge its greatly restricted use. As employed by intelligent physicians to-day, rupture of the uterus is doubtless a remote danger to the mother; but if we only had access to Clay's *Hand-book of Obstetric Surgery*, and gave ergot when the os uteri became dilated to about the size of half a crown, as therein directed, the prospect of a lacerated cervix would be exceptionally good. The approximately uninterrupted pressure of the head upon an incompletely dilated os is well calculated to bring about this untoward result. Clay is evidently prejudiced in favor of ergot, for he allows its moderate use in primiparae, and bids for distinction in connection with its introduction to British obstetric practice.

Rupture of the perineum is an accident, irrespective of the use of ergot, which is occasionally unavoidable. The wonderful power of the uterine contractions under the influence of ergot is best appreciated by those whose hands have been subjected to the pressure. In proportion as ergot is used, does the distention of the perineum become unmanageable, and the liability to its serious injury increase. Too little attention is paid to the fact that in lingering labor the maternal passages are hot, dry, and unprepared for the rapid and forcible expulsion of the child. More or fewer abrasions of the mucous lining cannot fail to occur, over which the lochia must flow, and through which septic matter may be absorbed into the circulation of the mother, and prejudice her chances of recovery, while lacerations of the cervix generally escape detection until long after-

ward, when their ultimate effects have impelled her to consult her physician.

The writer felt that he could not too strongly urge the importance of withholding ergot during the entire period of dilatation and subsequent expulsion of the child. Exceptions will be taken to his total prohibition by men of experience, who claim immunity from accident.

Granting that these claims are sometimes well founded, the facts yet remain that ergot is daily given before the cervix is fully dilated; that rigidity and laceration often follow the sudden and continuous impingement of the head upon it; that the drug is often and repeatedly given to save time, or through deference to the wishes of the patient, and before any disproportion of diameters can be accurately ascertained. The gauntlet of impaction, the forcible passage of a large head through a small pelvis, pelvic phlegmasia, sloughing, septic absorption, etc., must be inevitably run. In view of all this, and more which might be pointed out, did time serve, we are confronted by this question: Do the benefits arising from this use of ergot compensate for the risk incurred?

But little notice has yet been taken of idiosyncrasy. In one case the writer has seen the ordinary symptoms of collapse follow the use of a moderate dose of ergot before delivery of the placenta, accompanied by a tonic contraction at the neck of the uterus, which effectually prevented its accomplishment for several hours. Within a few years, several similar cases have been reported in the journals, but whether this is an important factor in the production of the deplorable results sometimes following the exhibition of ergot, remains to be demonstrated.

Considering the action of ergot upon the circulatory system, an enfeebled or diseased heart would appear to be a contra-indication, which is universally ignored.

Though abuse may grow out of the use of the forceps, as well as of ergot, their employment presents marked advantages over the latter. A case which is suitable for ergot admits of their application; the liability to lacerations is materially lessened; the progress of the child is under control, the risk of asphyxia is obviated, and its safety is assured. The danger to the child can no longer be underestimated. Whether a poisonous effect is produced, as has been claimed, cannot yet be definitely stated, but the tendency to tetanic contractions with prolonged pressure upon the placenta or funis seriously interferes with the oxidation and decarbonization of the foetal blood, and imperils the life of the child. If Churchill<sup>1</sup> be followed, who allows ergot to be given when the breech presents, how can this danger fail to be materially increased when the placenta is firmly compressed between the unyielding head and the uterine wall?

Spiegelberg insists upon the necessity of carefully observing the foetal heart after the use of ergot, in order that the forceps may be immediately resorted to in threatened asphyxia. That this is often done may well be doubted.

Benicke reports twenty-seven cases in which ergot was given during the second stage on account of uterine inertia. Spontaneous delivery occurred in but seven of these cases.

It should be axiomatic with every practitioner that economy of his own time never justifies the use of ergot, but beyond every private and selfish consideration he cannot escape the responsibility imposed by a knowledge of its unreliability, its manifold dangers, and the frequent necessity for instrumental interference.

It is after the uterus has been completely emptied of

<sup>1</sup> System of Midwifery.



its contents and for a varying degree of time after delivery then that ergot, in the opinion of the writer, meets its proper and strongest indication. No physician should attend a case of labor without having ready to hand hot water and a solution of ergotine, with appropriate syringes prepared for instant use should hemorrhage occur after complete evacuation of the uterus.

Post-partum hemorrhage is thus robbed of half its terrors. One of the most frequent indications for the use of ergot is subinvolution of the uterus. It has long seemed to the writer that appropriate prophylactic treatment, provided it could be applied, would greatly reduce the number of these cases. This treatment, which is found to be impracticable without the hearty coöperation of the patient, should begin from the moment the third stage of labor is completed. At this time, when the uterus has thrown off the burden which it has carried for nine months, the organ weighs, according to Heschl, from twenty-two to twenty-four ounces, and its length, according to Berner, who has measured it in sixty-four cases, averages four inches. At the end of the first week, at which time women often get up, the uterus weighs from nineteen to twenty-one ounces; at the end of the second week from ten to eleven ounces; at the end of the third week from five to seven ounces; and the nearest possible approach to the normal weight of about two ounces is not reached until the close of the second month. The new mucous lining of the organ does not form before the third week. We must dissent then from the views of an eminent writer if, as reported, he advocates the encouragement of the patient to rise and dress on the third or fourth day after delivery in ordinary cases. The writer ventures the opinion that this time for keeping the bed or lounge is much too short. Indeed, the time-honored period of nine days does not seem long enough. At this time, even although the bulk of the uterus is much reduced, we have seen that it yet remained enlarged, soft, congested, and too heavy for its relaxed supports. Walking, standing, lifting, pelvic inflammations, etc., contribute to retard the process of involution, in many cases entirely arresting it short of completion, when we have resulting the condition of subinvolution, the grand predisposing cause of that long train of symptoms so familiar to the physician. Have we not here a clear indication for prophylaxis? The patient should not only be kept longer in bed to facilitate involution, but we shall do well to remember that it is the soft, spongy, subinvolved uterus for which Bartholow recommends ergot. Believing that the process of involution is materially aided and advanced by the cautious use of ergot, it is the practice of the writer to give it in moderate doses for some days after delivery.

Corroborative evidence of the value of this plan of treatment is not yet abundant, but Dr. Garrigues, of New York, may be briefly quoted upon the use of ergot as follows: "ergot ought never to be given during labor. I use this drug in every labor, but not until after the placenta has been expelled. I give it even for four or five days, because I think that by causing contraction of the muscular coat of the bloodvessels, it counteracts absorption of septic matter, and by increasing, uterine contractions insures good involution."

Dr. W. A. DUNN, of Boston, then followed in a paper on the same subject.

#### AFTERNOON SESSION.

DR. J. W. WARREN, of Boston, read a paper on  
GLYKOGEN.

He said: Of all the bodily organs common to both sexes, no one perhaps has attracted the attention of the medical profession so constantly and so universally as the liver. One other organ, the uterus, has been a

worthy rival. We are still far from knowing with any exactitude what the liver—or indeed almost any organ of the body—really does. But we have taken the first great step at least on the road to knowledge. Much that is done is published in journals or pamphlets not very accessible to the general practitioner. I have ventured, then, to ask your permission to-day to act as a modest filter in presenting as concisely as may be some of the results of work done by many authors in the past few years, and bearing upon one function of the liver—I mean its glykogenic function. We are accustomed, nowadays, to think of glykogen. There are members enough of this Society, still hale and hearty and in busy practice, who never heard of any such substance until they had been in active work for years, when the discovery was made that the liver contained a starch-like body which, under certain conditions, is changed into sugar, and this discovery is associated with the name of the great Frenchman, Claude Bernard. Bernard had found sugar in the liver, and had described its production as a new hepatic activity, so that when yet another new liver substance was found, capable of easy transformation into sugar, the name of sugar-former, or glykogen, was naturally suggested. Circumstances have combined to attract much attention to its study. Physiologists have long recognized that the glykogen problem has far more importance than the explanation of such a disease. The whole problem of nutrition is very far from a solution.

The chemical story of glykogen can be very briefly told. It is, when dry and pure, a white powder, perfectly amorphous, showing nowhere the least tendency to crystallize. It is soluble in water, at least it seems to go into a solution of a peculiar opalescent character. It rotates the plane of polarized light to the right, three or even four times as much as glucose. The opalescent solution can be cleared by the addition of an alkali or an organic acid, but it is probable that a modification of the glykogen is brought about by this treatment. It is precipitated by alcohol and by ether. The ordinary method for obtaining glykogen is simple, and for its best form we are indebted to Brücke. The tissue to be treated is to be minced as fine as possible and extracted in hot water, as long and as often as anything is taken up. The filtrate is then freed from such albuminous bodies as have passed in the hot solution, and the glykogen is precipitated by alcohol, washed, redissolved, and again precipitated, until the desired degree of purity has been attained.

It is usually considered easy to obtain perfectly pure glykogen, free from salts that is, and leaving no ash upon combustion. But there is apparently a discrepancy in the statements, for only a few weeks ago a careful worker in this department reported that he found perfectly pure glykogen, which he had very carefully prepared, to remain in solution despite the addition of a considerable amount of chloride of sodium, which caused a complete precipitation. Under the influence of various acids, and particularly of numerous ferments, glykogen becomes more or less changed, and these changes can, to some extent, be traced by the behavior of the body to iodine. Within a few years it has been shown that the action of the ferments on glykogen produces a sugar not unlike glucose, and yet different enough to be of importance.

The exact chemical composition of glykogen is not certainly known—it belongs to the carbohydrates, *i. e.*, it contains only carbon, oxygen, and hydrogen; these latter in the same proportions as water. Hoppe-Seyler gives it the formula,  $C_6H_{10}O_5$ .

If we were to name the sources from which we can obtain glykogen, it would be necessary to mention not only most all the tissues of the vertebrates, but we should have to include many other forms of animal

life. Such a thing as vegetable glycogen has been found; a fact, too, that has never received the attention it probably deserved. It interests us especially to remember that the mammalian liver and muscular tissues contain very considerable amounts of glycogen, and this is true not only of the developed animal, but also of the newborn which have not yet received any nourishment save through the uterus or in the egg. The presence of glycogen in the muscle is no new discovery. The percentage of glycogen found in muscular tissue is small as compared with that of the liver; but if you will take the trouble to figure it out, you will find that the total amount in all the muscles is oftentimes not very much less than that found in the liver. That this is actually true was demonstrated some three years ago by Boehm. The coagulated muscle-tissue retains the glycogen, it being much more difficult to prepare it for extraction than the softer tissues of the liver. In view of this fact—and I see no reason to question the trustworthiness of Boehm's statements—it is clear that all previous observations on the quality of muscle-glycogen, and its behavior under various influences, are subject to very considerable doubt. The form in which glycogen is stored up in the muscles is unknown.

Concerning the conditions which favor the increasing of the glycogen in the liver or the muscles as well as the conditions favoring its disappearance. There is unfortunately much disagreement despite the very large number of experiments reported. On one point, however, there is a general unanimity that feeding increases, while hunger distinctly decreases the amount of glycogen; among the foods, those containing sugar or whose digestion produces much sugar, have seemed especially efficacious.

The influence of the carbohydrates admits of various explanations. The glycogen might be formed directly from them by some synthetic process which prepares it to be stored up until wanted, or the carbohydrates might take the place of the glycogen already in the liver, and being constantly stored up there, but only to be normally carried off again nearly as rapidly. In this case it will be seen that an increase of the glycogen could take place, running parallel with the inflow of the carbohydrates. Yet another simple explanation offers itself. A portion of the carbohydrates may be changed directly into glycogen, the remainder being worked up otherwise, and acting in some way as a stimulus to the formation of glycogen out of other substances.

Not a little of this difficulty has been occasioned by the very natural view that the liver-sugar came directly from the glycogen; sugar is found in the liver, and its increase after death has long been known, and a decrease of glycogen has been postulated on, even seemed to be shown to be associated with this change. It has also been clearly shown that the development of sugar in the liver, as a post-mortem change, is the development of grape-sugar, and is not associated with a diminution of the glycogen, or at least that the disappearance of the glycogen bears no relation to the development of sugar.

Of greater importance still is the demonstration, that the liver is capable of forming sugar out of albuminoid material. This alteration of albuminoid material seems to be a distinct function of the liver, a function then, which is carried on independently, it may be, of the glycogen present.

Of the value of glycogen to the muscle but little is known. We know, as already mentioned, that large quantities are found in muscular tissue after feeding, and that hunger caused a marked diminution of the quantity. Boehm, however, found that rigor mortis itself is not necessarily associated with a lessening of

the glycogen if putrefactive changes are avoided. If we wish then to summarize briefly, we may say the presence of glycogen is closely associated with the first steps of nutrition.

One point should not be left out of sight, and that is this: That wherever the disappearance of any putrefactive change can be assumed, we shall find a marked diminution of glycogen, and it becomes a serious question how far the disappearance of glycogen, as reported in all earlier investigations, has been due to some putrefaction—in other words, has not been merely functional.

DR. O. F. WADSWORTH, of Boston, then read a paper on

#### PHLYCTENULAR DISEASE OF THE EYE.

He referred to the multiplicity of names which have been given to the affection, some of them misleading, as implying analogies which do not exist, the result being to make the general understanding of the disease more difficult than it need be. To a certain extent the same effect is produced by the habit of treating separately of conjunctival and corneal disease. The disease is essentially the same whether it involve conjunctiva or cornea. It is characterized by the eruption of vesicles or pustules on conjunctiva or cornea, or on both, and often attended by very troublesome blepharospasm. The frequency of the disease is very great, it is mainly confined to young children, and often leads to permanent impairment, or even to loss of sight. It is often obstinate, and tends to recur on slight provocation, yet the importance of the trouble is not generally appreciated by the laity. The various forms which the eruption may present was described, and the different degrees of danger, as cornea or conjunctiva is implicated, pointed out.

The so-called photophobia may be excessive, but is not by any means always in accord with the severity and danger of the disease. Some of the worst forms have the symptoms but little pronounced. The true scrofulous ophthalmia is in many cases not properly applicable, yet it suggests the direction in which the cause is to be sought, *i. e.*, a condition of health below the normal. Such exposure as excites catarrhal affections of the mucous membrane of the throat and nostrils is an exciting cause, as are indirectly the exanthemata. The prognosis can usually, at first, be only a provisional one on account of the inclination to relapses and recurrence. General treatment is of the highest importance; nourishing food, bathing, fresh air, light, and tonics. Blepharospasm, so-called photophobia, is excited by the irritation of the terminal branches of the trigeminus, not by hyperæsthesia of the retina. The indication is to relieve the hypersensitiveness of the cornea, and atropine offers the best means. Eczema of the lids and face is a frequent accompaniment, and demands appropriate treatment. Irritants are to be avoided. Success in treatment depends on attention to details.

Local treatment consists in the use of mild collyria, atropine, and the careful application of calomel, which latter should never be employed when iodine is given.

Astringents are in general to be rejected, yet when there is the complication of a catarrhal conjunctivitis they may be used with caution. For the sluggish infiltration of the cornea hot fomentations are of benefit. The many means recommended for promoting absorption of corneal opacities left by the disease are of little value.

DR. B. HARTWELL, of Ayer, also read a paper on

#### MINOR INJURIES OF THE SPINAL CORD,

which was based upon the notes of nine cases, in which both the injury and the force used to produce it were slight, five of the nine were passive or subacute hy-



peræmia, and four a mild form of chronic myelitis. They were of from two to twenty years duration, and were not severe enough to prevent a certain amount of labor being performed.

These minor injuries are of special importance to us as practical physicians, from their comparative frequency, their liability to result in permanent changes in the substance of the cord, and because we can do much in the way of relief and cure by appropriate treatment.

After stating their importance in a medico-legal point of view, he approvingly quoted Hodges' view in regard to the positiveness of the symptoms in spinal concussion, and also the generally favorable prognosis in such cases. He gave the history of two cases of spinal concussion from railroad accidents, in which the symptoms were not developed until four and ten days after the injury, followed by very good recovery.

The author then passed to cases caused by jar of railroad carriage, and reported two cases of passive or subacute hyperæmia, one of the cervical, the other of the lumbar enlargement of the cord of six to twelve years standing, which were finally compelled to seek relief. He then gave the history of two cases of injury of the lumbar enlargement of the cord, by way of illustrating the larger number of those minor injuries of the cord, caused by concussion, blows, or other means, in which there is no external sign of injury, and the patient is able to attend in part to daily duties. These are transverse lesions of the cord, and are either subacute hyperæmia or a mild form of chronic myelitis, the line between them being an artificial one.

The diagnosis of these cases in the early stages is often difficult when only backache is present, with perhaps neuralgic-like pains extending into the legs, simulating sciatica.

The points in diagnosis are tender points along the course of the nerve in the latter, which do not occur in the former, the recumbent position aggravates pain in cases when there is increased circulation in the cord, the history of injury to the back, and finally trial of remedies: Strychnia increasing the pain and other symptoms of myelitis and hyperæmia, ergot and belladonna relieving them.

The prognosis is usually good; some of the cases getting entirely well, others remain greatly relieved, and occasionally one relapses into a hopeless case of chronic myelitis; in these latter, the change is usually sudden; as a rule, the cases are worse in hot weather, and are made temporarily worse by hard work or active exercise.

The recent cases of injury are treated by digitalis, aconite, bromide of potassium. Ergot usually aggravates, as is shown by Bartholow in a clinical lecture in THE MEDICAL NEWS of December 16, 1882: "Its administration in acute spinal inflammation is improper, because of the peculiarity of its action, it induces an anæmia of the arterial distribution"—an ischaemia properly speaking—but the blood thus driven from the arterial side accumulates on the venous side.

Hot douches and mild irritation of the spine do good in all cases. In the chronic form ergot and belladonna in full doses, dry cups along each side of the spine night and morning, galvanism, rest, not absolute, but with moderate exercise, are the remedies upon which we most rely. Belladonna gives most immediate relief from pain, and acts best in cases in which the bladder is involved.

PROF. T. M. CLARK, of the Institute of Technology, then made some interesting remarks on

#### PLUMBING APPLIANCES.

He said: You will hardly expect me to say anything here about the long list of diseases attributed to the

inhalation of sewer gas. Independent, however, of this question, there is another branch of inquiry which seeks to know how far the appliances now in use accomplish this result. In the discussion of this subject, the experience of the architect ought to be of some small service, for no one except a plumber or an engineer is kept more constantly in the current of the new inventions, and no one has a better opportunity for trying those which he may see fit to adopt. Some defects they all have, but improvements are made every day, the value of which is best appreciated by recurring to the developments of the more important inventions.

We shall find that great changes have been lately made in the design of conduits. In the primitive form of drain, the straight pipe extending from the sink or other receptacle of wastes in the house to the vault or cesspool outside, the lining of decomposing slime soon becomes objectionable. With the introduction of porcelain fixtures, it became apparent that something was still wanting to the success of the system, and attention was turned to the trapping. It was discovered that in the descent of a considerable quantity of water down a main drain-pipe, a partial vacuum was left behind it, into which the air from outside would press with sufficient force to push out easily the little column of water in the traps. The water being thus removed from the traps, left them open flues for bringing air from the soil-pipes into the cistern. The remedy for all these troubles, caused by the exhaustion of air in pipes behind moving bodies of water, was to break the "siphon" by the admission of air.

The adoption of improvements was followed by some unexpected good effects. The uniting of traps is a somewhat expensive matter, since the length of the waste-pipes is nearly doubled, and many attempts have been made to avoid it by the use of anti-siphoning expedients. However the system of pipes and traps may be managed, it is essential that all joints should be tight.

We need to know as much as this about the general methods of managing waste-pipes before we can appreciate some of the better points in the modern auxiliary apparatus. We find that the improvements within the last few years have been quite as great as in the system of pipes and trapping. It is not long since the ordinary appliance under this name consisted of an iron hopper, painted or enamelled inside, furnished with an iron trap at the bottom. This closet, when properly kept, was not so bad as some that have succeeded it. The main objection to it was that the bowl did not contain any water, and was liable to streaks and stains, until the contents accumulates in it to such an extent as to prevent the pan from moving. The operation of the closet is not interfered with, but the putrescent mass, of course, gives off its appropriate odors, which escape into the room in clouds whenever the pan is opened, and leak in slowly at all other times. It was obvious enough that the abolition of the filthy contents would be the next improvement in water-closets, but this was not accomplished at once. The first step was to reduce its size. In this way a large volume of water could be kept in the bowl. To facilitate this, the whole space from the outlet of the bowl to the valve is, in the best closets of this kind, kept as smooth as possible. Another novel mode of accomplishing a similar result was introduced in the Jennings' closet. The Jennings' closet consisted in a hopper with the outlet bent literally so as to admit of closing it by a gate or plunger, which serves to retain the water at a height in the bowl limited by an overflow. The difficulty, however, of insuring the attention necessary to keep this closet in order resulted in endeavors to produce a simpler apparatus. The most

successful devices for this purposes have all taken their origin from the ancient hopper, which, while preserving its simplicity of form and freedom from moving parts, has been improved by the addition of a full and well-directed flush of water into the best appliances.

The modern hoppers, instead of being enamelled or painted iron, are all of white glazed earthenware. In order to secure the flush which is essential and which distinguishes the modern from the ancient hopper, the water is introduced all around the rim instead of at one point. The contents of the bowl are driven straight through this trap. In the hopper hitherto made, however, the trap is set so low that the water-line in it does not rise higher than its lower outlet. The amount of defilement is so slight as to produce little or no real annoyance, but in a good house every suggestion of foulness is to be avoided. A demand has recently arisen for a form of closet which should combine the advantages of the flushing rim hopper with the further one of retaining in the bowl a sufficient quantity of water to receive the soil without allowing it to touch the glazed surface.

With respect to other appliances, the same tendency to the substitution of vitrified materials for metals is to be observed in kitchen and other sinks, which were formerly used in good houses, of wood, then of iron, are now very generally made of soapstone, and they will before long be replaced by glazed earthenware.

In the modern habitation there must be no holes for refuse, and the sinks of the present day stand on iron or wooden legs, entirely open to the room. Water-closets are now very commonly set in the same manner. It is certainly true that the smallest vestige of the stench which were once considered indispensable to domestic life, are now pursued with relentless vigor by those who know how to deal with them. Ten years ago it was the custom to make a single pipe do for several fixtures, running, for instance, the waste-pipes of the bath-room into the trap of the water-closet. This left a certain length of waste-pipe free to collect slime on the inside surface and to transmit the gases engendered by the decomposition of the slime back into them. The return of corrupted air from the short lengths of the house-wastes is quite incompatible with the new ideas, and every fixture is now, in good work, trapped as close as possible to the outlet. In addition to this, good modern work provides for the circulation of outdoor air through the whole system of drain- and waste-pipes.

The next improvement in house-drainage will probably be the provision of ventilation pipes, by which air will be constantly drawn out of bath-rooms and closets through the strainers and overflows of the various kinds of apertures ventilating the apartments in which they are placed.

It cannot be doubted that the householders of the future will demand a degree of purity in the atmosphere of their homes of which we know little as yet; and no one who has lived in rooms where the air is constantly changed, will willingly submit to breathe again the exhausted and tainted atmosphere which now pervades the majority of dwellings.

WEDNESDAY, JUNE 13TH, SECOND DAY.

#### THE SECRETARY'S REPORT.

THE SECRETARY, DR. F. W. GOSS, read the records of the last annual meeting, and announced the names of the Fellows who had been admitted to the Society during the year—about ninety in number. He then read the names of twenty-seven deceased Fellows, whose average age was 60½ years.

#### THE TREASURER'S REPORT.

THE TREASURER, DR. F. W. DRAPER, then presented his annual report, which showed an income of \$8,595.79, an outgo of \$7,056.37, and a balance in the treasury of \$1,539.42. The invested funds amount to \$32,420.17, and remain unchanged, and yield four per cent. The treasurer announced that, owing to the energetic action of the District Treasurers, the list of delinquents was smaller than ever before, notwithstanding the large accessions to the Society.

#### THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE.

On motion of DR. H. P. BOWDITCH, of Boston, it was voted that a committee of three be appointed to memorialize Congress in regard to the disposition and care of the Library of the Surgeon-General's Office, and urge upon our Representatives the importance of providing a fire-proof building for its preservation in connection with the Museum, and distinct from the general Congressional library; also to memorialize Congress to make a liberal appropriation for the completion of the *Index Catalogue*, and for the general purposes of the library.

The Chair appointed as the committee under the above resolution, Drs. H. P. Bowditch, H. P. Wolcott, and O. F. Wadsworth.

The request of the President of

#### THE COLLEGE OF PHYSICIANS AND SURGEONS,

that diplomas granted by the College be recognized by the Society, was, after some discussion, laid on the table.

DR. E. N. WHITTIER, of Boston, then read a paper on

#### RECENT CHANGES IN THE METHOD OF MEDICAL INSTRUCTIONS.

He briefly reviewed the old system of acquiring a knowledge of the science of medicine by studying with some physician. He said that the method was unsatisfactory, and the practice of medical apprenticeship was practically abolished and superseded by the co-operative system of instruction, students having advantages in class instruction by different lecturers and professors which they could not have while studying with one physician. The rapid growth of hospitals requires a larger number of under-graduate appointments, and the difficulty is not to get enough but to select from those fitted for the positions, showing the high standard of students in medical colleges. He then considered some points in the present system of instruction which he thought might be improved.

DR. J. S. GREENE, of Dorchester, then read a paper on

#### NEURASTHENIA: ITS CAUSES AND ITS HOME TREATMENT.

He said it was not work, but competition, anxiety, hurry, and excitement of business and society, not education, but cramming, that causes nervous exhaustion. He then spoke in detail of the influences resulting in nervous exhaustion, and considered the different methods of treatment, paying a high tribute to those who have endowed hospitals for the reception and treatment of persons suffering from "neurasthenia."

DR. J. W. SPOONER, of Hingham, then read a paper on

#### THE ARTIFICIAL FEEDING OF INFANTS.

The different forms of food he placed under three divisions:

1. Milk of some other animal.
2. Condensed milk.
3. Prepared foods.



1. *Milk of some other animal.*—The ideal infant's food is the breast-milk of a healthy woman. In its absence, we must get a milk that resembles, as nearly as possible, human milk. That of the cow is generally used because it can be easily obtained, although the milk of the ass, the mare, and the goat, in chemical composition, resemble breast-milk more closely.

Different examiners have reached contrary results in the analysis of human milk. After an examination of different tables, the writer concludes that the often-quoted tables of Verneuil and Becquerel are incorrect in this respect that they make the amount of casein too large, and that of sugar too low.

The results of Henri and Chevallier and those of Arthur V. Meigs are thought to be more correct.

These tables show that human differs from cow's milk in containing much less casein and more sugar. The slightly acid reaction of cow's milk, first stated by Parker, and again by Meigs and Pepper, was confirmed by an examination of the freshly drawn milk of nine pasture-fed cows, the milk in all these cases being faintly acid.

To make cow's milk suitable for the new-born child, it must be rendered alkaline, diluted with double the amount of water, and sweetened, preferably with milk sugar, and a tablespoonful of cream added to each nursing. Where hard curds are formed in the infant's stomach, even after dilution, the writer has found a solution of Irish moss, used in place of simple water, to act well in breaking up these cheesy masses.

2. *Condensed milk* is often a useful diet for children under three months. After this age, children fed upon condensed milk, although they may seem fat and well, yet fail to develop strong muscle and bone. The food seems lacking in albuminoids.

3. *Prepared foods.*—The test by which such articles of diet must be judged is the comparative absence of crude starch. Children less than six weeks old change starch into sugar slowly and imperfectly. Mellin's food has been found by the writer to be better than any preparation of this kind that he has used.

In conclusion, the following list meets the approval of the writer:

1. Diluted milk, and under this head the preparation recommended by Dr. Arthur V. Meigs (*THE MEDICAL NEWS*, November 4, 1882) deserves careful attention.

2. Mellin's Food.

3. Milk diluted with a solution of Irish moss or gelatine.

4. Condensed milk.

DR. W. B. GOLDSMITH, of Danvers, then read a paper on *The Early Symptoms of General Paralysis of the Insane*.

The following named

#### DELEGATES FROM OTHER STATE SOCIETIES

were then introduced to the meeting: Drs. F. W. J. Prey and L. I. Young, of *Maine*; E. R. Campbell and Robert Dinsmore, of *Vermont*; G. T. Swartz and H. J. Miller, of *Rhode Island*; G. G. Hopkins, P. V. S. Prun, and E. N. Brush, of *New York*; and Alice Bennet, of *Pennsylvania*.

After an intermission of fifteen minutes,

#### THE ANNUAL DISCOURSE

was delivered by AMOS H. JOHNSON, M.D., of Salem. He referred to the wonderful progress made in the study of astronomy and electricity during the last few years, and then turned to the consideration of the progress in the science of medicine, saying it was chiefly the result of judgment and critical observation. He spoke of the danger of allowing patients to follow Nature as a guide, declaring that in many instances

her advice proves fatal, and physicians must take the guidance of Nature's control over his patients. The indifference with which the presence of some contagious diseases is regarded is one of the moral influences which has to be met. The science of preventive medicine is of recent growth, but facts acquired are of great value. He expressed the hope that the time would come when the State Board of Health would be relieved from the fear of political influences and attain its greatest usefulness.

Nature cannot be relied upon to best interpret her suggestions. Careful study of the results obtained by the investigations of others is necessary. Observation is not interpretation—to see is not to learn.

At the conclusion of his address a vote of thanks to Dr. Johnson was passed.

The following were elected

#### OFFICERS FOR THE ENSUING YEAR:

*President.*—Alfred Hosmer, M.D., of Watertown.

*Vice-President.*—Ira Russell, M.D., of Winchendon.

*Treasurer.*—Frank W. Draper, M.D., of Boston.

*Corresponding Secretary.*—C. W. Swann, M.D., of Boston.

*Recording Secretary.*—F. W. Goss, M.D., of Roxbury.

*Librarian.*—David H. Hayden, M.D., of Boston.

*Orator for Anniversary in 1884.*—John Crowell, of Haverhill.

THE ANNUAL DINNER of the Society was served at 1 P.M., in the skating-rink on Clarendon Street, Francis H. Brown, M.D., of Boston, presiding.

## NEWS ITEMS.

### CLEVELAND, OHIO.

(From our Travelling Correspondent.)

THE AMERICAN MEDICAL ASSOCIATION has adjourned for this year, and the majority of the members have already started for their homes. Upon the whole, it has been a very pleasant meeting, and the great majority of those present seem to have thoroughly enjoyed their week's vacation. It is true that the hotel accommodations were insufficient for so large a gathering, and that in consequence some of the members could not obtain comfortable accommodations; but their graphic accounts of their discomforts were for the most part given with great good-humor to small and laughing audiences, and everybody was disposed to make the best of the situation.

Cleveland is very justly counted as one of the five most beautiful cities of the United States, her characteristic features being indicated by her sobriquet of the "Forest City," and during this week the foliage has been very near perfection. A stroll or drive down Euclid Avenue or Prospect Street, at this time of year, is a special pleasure to those who can appreciate without envy the beautiful homes which line these favorite promenades, with their spacious lawns. About twenty of these homes were opened for receptions in honor of the Association on Wednesday and Thursday evenings, and these were thoroughly enjoyable and enjoyed.

You have received full accounts of the literary and scientific work of the Association, which was about up to the usual standard. The most important topics of conversation were the New York Code of Ethics, and the proposed New Journal of the Association, yet comparatively little was said about either. No one wished to discuss the Code—the feeling being almost unanimous that this is no time to propose changes.

Some stir was made by a paper read by Dr. A. L. Gihon, U. S. Navy, in the Section on State Medicine, in which he expressed, with more energy than discretion, a quasi-contemptuous feeling for the old Code,

and an admiration for the new. When it became known that the author of this paper, who was one of the Nominating Committee, was to be nominated as one of the vice-presidents of the Association, there was a very general feeling of dissatisfaction, and the matter came up in the Committee in the form of a resolution to reconsider the nomination. The matter was finally settled by Dr. Gihon's signing a paper, declaring his unqualified adherence to the old Code, which paper was read in connection with his nomination, and probably prevented the presentation of protests and the reference of the matter to the Judicial Committee.

The Council seems to have had very little to do, almost the only matter adjudicated being the case of Dr. Goodwillie, of New York, who had written a letter to the Chairman of the Committee of Arrangements, declaring his rejection of the old and his adhesion to the new or New York Code, whereupon protests against his being allowed to register were presented by delegates from the New York Academy of Medicine.

It seems that Dr. Goodwillie was allowed to register, inasmuch as he had signed the application made by all delegates upon which was the following statement: "In acknowledgment of having adopted the Constitution, By-laws, and Code of Ethics of this body, and of my willingness to abide by them, and use my endeavors to carry into effect the objects of this Association, I hereunto affix my name."

The Doctor, however, claimed that he had signed this under compulsion, and did not consider it as binding upon him, so far as it was in conflict with the New York Code. The decision of the Council was that his name should be cancelled from the registry-list, and his money be returned to him; and the essential point upon which his case turned appears to have been that he did not confine himself to criticising or expressing an unfavorable opinion of the Code of the Association, which every one has a right to do, but that he formally declared that he did not intend to abide by it.

The nomination of Dr. Flint appears to give very general satisfaction, although many of the Southern members claim that the Presidency should have been given to Dr. H. F. Campbell, of Georgia, and the claims of this gentleman were strongly urged in the Nominating Committee.

Everybody is glad that the next meeting is to be in Washington, which is recognized by all as the proper place to be made, what might be called, the home-centre of the Association, and the only doubts expressed are as to whether sufficient hotel accommodation will exist in the latter part of the long session of Congress.

As to the forthcoming journal, every one is willing to see the experiment tried, but few are sanguine as to its success under existing conditions. It will be tolerably plain sailing for the first few months so far as quantity of material is concerned, at least, but after that will come the rub. However, we all wish it success.

**RESIGNATION OF PROFESSOR WALLACE.**—PROF. ELLERSLIE WALLACE has resigned the Chair of Obstetrics and Diseases of Women and Children in the Jefferson Medical College on account of ill-health. His successor has not as yet been elected, but the following gentlemen have been nominated for the vacant chair, at a meeting of the Trustees held last Monday evening: Drs. A. H. Smith, Ellwood Wilson, and F. H. Getchell, of Philadelphia; J. C. Reeve, of Dayton, O.; Theophilus Parvin, of Indianapolis; and E. W. Jenks, of Chicago. The election, it is understood, will be held on June 25.

PROF. PORRO has resigned his chair in the University of Pavia, and has been nominated as Director of the School of Obstetrics in Milan.

**THE MASSACHUSETTS MEDICAL SOCIETY AND WOMEN MEMBERS.**—The Councilors last Tuesday, at the annual meeting, refused by a vote of 62 to 58 to admit women to membership in the Society.

**NEW JERSEY STATE MEDICAL SOCIETY.**—The One Hundred and Seventeenth Annual Meeting of the Medical Society of New Jersey was held at Atlantic City, on June 12th and 13th, and the following officers were elected for the ensuing year:

*President.*—Stephen Wickes, M.D., of Orange.

*Vice-Presidents.*—P. C. Barker, M.D., of Morristown; Joseph Parrish, M.D., of Burlington; Charles J. Kipp, M.D., of Newark.

*Corresponding Secretary.*—William Elmer, Jr., M.D., of Trenton.

*Recording Secretary.*—William Pierson, M.D., of Orange.

*Treasurer.*—W. W. L. Phillips, M.D., of Trenton.

*Standing Committee.*—Drs. T. J. Smith, of Bridgeton; Samuel S. Clark, of Belvidere; E. J. Marsh, of Paterson.

The next meeting will be held at Cape May, on the second Tuesday in June, 1884.

**THE STATE MEDICAL SOCIETY OF DELAWARE.**—At the annual meeting of this Society, held at Wilmington, on June 12, the following officers were elected for the ensuing year:

*President.*—Robert M. Hargadine, M.D., of Felton.

*Vice-President.*—Willard Springer, M.D., of Wilmington.

*Secretary.*—George W. Marshall, M.D., of Milford.

*Treasurer.*—J. W. Sharp, M.D., of Camden.

**HEALTH IN MICHIGAN.**—Reports to the State Board of Health for the week ending June 2, 1883, indicate that scarlet fever, mumps, and erysipelas have increased, and that pneumonia, bronchitis, and diphtheria have decreased in area of prevalence.

Compared with the average for the month of May in the preceding six years, measles was much more prevalent, influenza was more prevalent, and intermittent fever and consumption were less prevalent during the month of May, 1883.

Including reports by regular observers and by others, diphtheria was reported present during the week ending June 2, and since, at fifteen places, scarlet fever and measles each at thirty-seven places. One case of smallpox was reported in Lyons Township, Ionia County, June 6.

#### OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JUNE 4 TO JUNE 11, 1883.

MCKEE, J. C., *Major and Surgeon.*—Assigned to duty as Post Surgeon Presidio of San Francisco, Cal.—*Par. 2, S. O. 56, Department of California, May 25, 1883.*

DE LOFFRE, A. A., *Captain and Assistant Surgeon.*—To proceed to Madison Barracks, N. Y., and report to the Post Commander for duty.—*Par. 2, S. O. 98, Department of the East, June 5, 1883.*

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.